fueloil & oil heat

OCTOBER 1959
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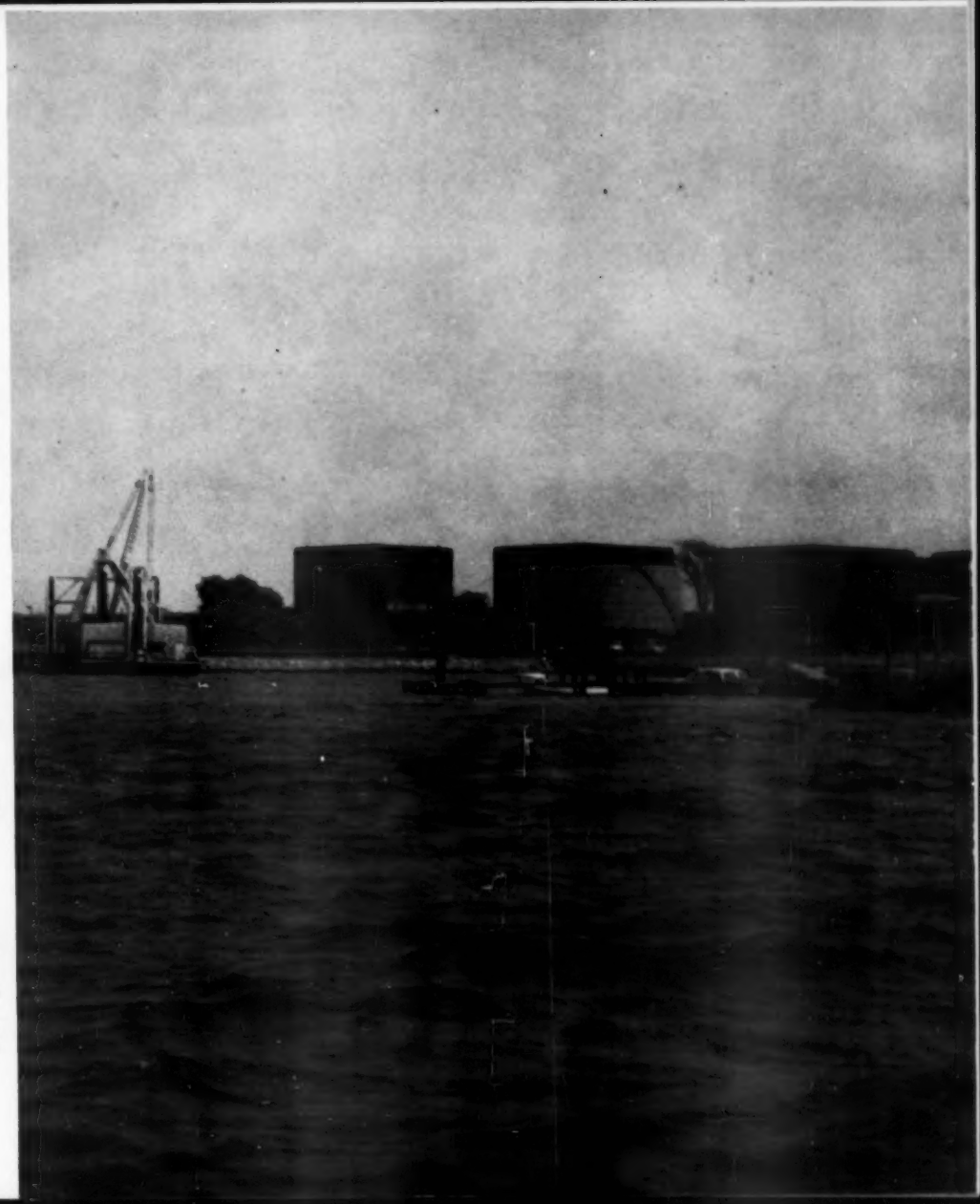

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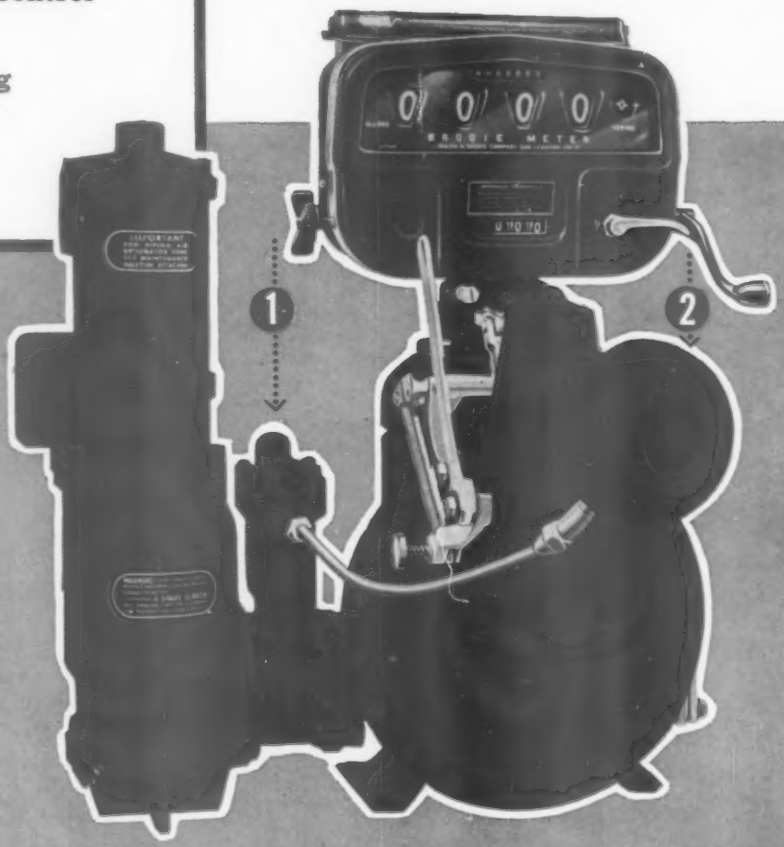

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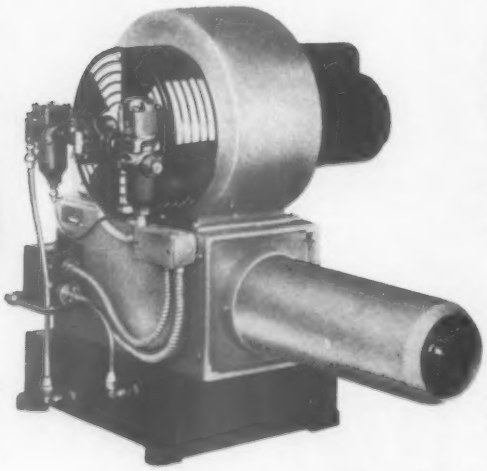

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OCTOBER fueloil & oilheat 1959

VOLUME 18 NUMBER 10

Editorial, circulation and advertising Office: 2 West 45th St., New York 36, N. Y.

CONTENTS

SUBJECT	PAGE	AUTHOR
Oil and Water can Mix	51	WILLIAM J. STEIN
New Firebox in 30 Minutes	54	
Growing with Chicago for 125 Years	56	
Air-conditioning Exposition	58	
Big little Businessman	60	
Sparky laughs at motor Trouble	61	
Now it's on the Bag	65	J. W. SCHULZ
Titusville has a happy Day	66	
Burner-Fueloils Survey	68	
NFC *Campaigns are helping*	71	
Heating oil Sales, 1958	72	
OHI *Directors explore Growth*	74	
COMMERCIAL - INDUSTRIAL SECTION		
Modern Oilheating for Schools, Part II	77	JEAN L. DUPUIS

NEWS

Oil Heat Exposition Space is reserved 24

Jersey and Humble merge 24

Commercial Standards issued 24

Hart Heat buys Mt. Hawley burner Dept. 26

BRI plans fall Conference 26

July building Contracts set Record 53

ESPA: Dealers can improve Operations 70

Navy issues shore facility Manual 132

DEPARTMENTS

6	Editorial Leaks
8	Government on Fuels
10	Names in the News
19	Oilheating Trends
22	Fueloil Prices
36	Industry Groups
82	Readers' Problems
94	Manufacturers' Activities
100	New Products

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Bert Dunphy, *Managing Editor* John W. Schulz, *Technical Editor*
V. M. Douglas, *Midwest Editor* Margaret Mantho, *Assistant Editor*
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A. G. WINKLER, *Advertising Director*
Lee Steedle, *Advertising Manager*
Dick Raymond, *Eastern Advertising Manager*
Ruth Wertheimer, *Advertising Production Manager*

Larry Alles, *Midwest Manager*
Room 200 *Chicago 4, Ill.*
224 S. Michigan Ave. *Phone: Wabash 2-9548*
Pacific Coast Representative: Don Harway
1709 West 8th St., Los Angeles 17, Cal. Phone: Hubbard 3-5141

Among other things . . .

On page 54, we report on laboratory tests made by Socony Mobil to evaluate combustion chambers made of ceramic felt material. This explains in some detail exactly how replacement combustion chambers can be installed quickly.

Sparky, the world's best serviceman, talks at length —as he always does—about how he prevents motor burnouts. He includes considerable amount of basic information on electricity and discusses the use of time-delay fuses to clear up motor trouble and prevent recurrence. Starts on page 61.

The Petroleum Products Survey on pages 68 and 69 is a study of the characteristics of a number of samples of fueloil collected from all parts of the country.

Cover photo: A view of Massena Oil's terminal and marina, presented as an example of how one fueloil distributor builds up summer demand and permits all employees to be kept all year. Story begins on page 51.

THE CENTENNIAL celebration at Titusville has come and gone, built around the magic date of August 27. But it's still our Centennial year; there will be meetings and celebrations of an important nature going on right up to Christmas.

The special speech for you to use at service clubs that we published in the July number, the step-by-step outline for a special Centennial parade in the August issue, are still as potent for October and November as in the summer. Don't let this once-in-a-lifetime opportunity for special publicity and better industry acceptance pass by until you have wrung it out. You'll only be 100 once.

IN A WAY, nostalgia is hard to sell, to ourselves at least, even though it makes good publicity. For us home folks in the industry it's more stimulating to use the Centennial as a springboard to the second century. The summer issue of *Esso Heatways* features the "Next hundred Years." After a few paragraphs of statistics, the lines that follow convey the meat of it:

"The years since the end of World War II which saw oil heat's best gains, also recorded oil heat's greatest challenge: natural gas competition. That oil heat marketers must begin dealing in realities and face this challenge is an economic necessity if the industry is to continue to prosper and grow.

"The future holds exciting prospects for heating oil:

"Requirements for new home construction in the 60's may set record highs.

"Modernized techniques for delivery and service will help to strengthen the appeal of oil heat.

"New uses of heating oil for snow melting, crop drying and tobacco curing are creating greater demands for heating oil.

"Increased consumer advertising by the industry and the activities of the National Fueloil Council are glamorizing the advantages of oil heat.

"New equipment developments for lower priced and highly improved burners and boilers are proceeding industrywide to the advantage of consumers and heating oil marketers.

"If this is a record of a dying industry, then the death knell will be a long time striking. But rather, it signifies a stepped up program not just to shore up the bastions of oil heat, but to bring the struggle against natural gas into the enemy's camp, as it were.

"The results are not to be known shortly. This is no early morning encounter where all we must do is wait for the fog to lift. This is a hundred years war, and it may not be over then.

"Natural gas competition is here to stay, accept it. But don't forget oil heat's fight for the market is just as much of a certainty.

"The next hundred years will be even more revealing. The new type of oil heat pioneer will be the marketing genius who sees the profit potential that others miss; who sees marketing strength where others see weakness; and who sees success where others see only failure. The next hundred years are his."

THIS MONTH'S contribution to the "Who wants Gas?" department comes to us in the September issue of *Fortune* magazine. You might enjoy the following miscellaneous sentences quoted from here and there in an article, "The Unnatural Problems of Natural Gas."

Here are the highlights: "The unhappy fact is that natural gas today is in a mess. Seldom has any industry been so fouled up by bureaucratic lassitude, so burdened with internal confusions and uncertainties." . . . "Pipeline companies have built their lines such great distances at such great cost that in some areas, like New England, natural gas is close to pricing itself out of the market. Other pipelines have cheerfully bid field prices up to new peaks in an effort to destroy competition." . . .

"Some distributors for their part have stepped up their drives for new customers for gas heating well aware that by 'rolling in' the high cost of today's gas with the cheaper gas purchased in the Forties it will be several years before consumers begin to hurt. By then of course the 'new' householders will be as captive as those who converted to cheap gas in the early Fifties; they will be locked in unless they want to add to their $500 to $1,000 investment in heating equipment, and convert to oil." . . . "The other (producer) has a conviction that the price of natural gas is unconscionably low and should be raised." . . . "Gas prices, unlike those of oil which both rise and fall, have never shown a disposition to go anywhere but up." . . .

"A Con Edison vice-president says 'the most effective way to regulate gas prices in the long run is to let competitive fuels do it.' If you let gas price itself out of the market it will settle down; as long as there's a sellers' market the producer 'ain't going to get religion,' but once we're past that point the oil industry can get very cutthroat; competition will then hold the price. This will come in two to five years."

There's a lot more to the article; why not buy the issue; you'll enjoy it.

THERE'S MORE PROGRESS to report in National Fueloil Council affairs. At its September 11 meeting the board of directors of the Council approved additional programs and voted to add to its staff a full-time Midwestern representative. He will work with refiners and marketers on their cooperative programs.

There now are a total of 53 local campaigns under way, representing a total investment in 1959 of well over $2 million. Additional refiner members to support the campaigns in 1960 will be Standard Oil Company (Indiana), Sun Oil Co. and Tidewater Oil Co. Also, there are at least two other prominent majors expecting to come along.

Bob Gray

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Note that the non-ferrous* UNIFIL Connector on the discharge end of the nozzle incorporates its own wrench. No need for the driver to drop the nozzle. Note that the mating threads and the internal surfaces are always protected against damage or wear from rough handling or dropping. Compare the compactness, the ability to resist abuse of the UNIFIL Nozzle Connector with the inherent weaknesses in any connector designed like a spout. How many spouts have you replaced?

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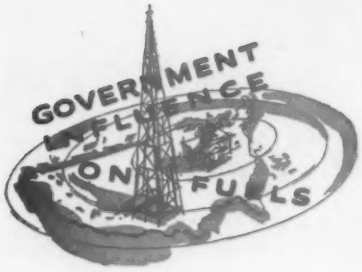


by James M. Collins

WASHINGTON — Congress has now quit after eight months of political wrangling with President Eisenhower —who clearly came out on top after a shaky start last January. Nearly every big oil and gas issue has now been put over until 1960.

The President's success this year seems related to three significant developments: (1) He correctly sensed public opposition to huge federal spending that could bring on inflation or higher taxes, (2) The new GOP leader in the House, Rep. Halleck (R., Indiana) was resourceful and tough, holding together the republican-southern democratic coalition on critical votes, and (3) the democratic "liberals," whose numbers were swelled by last November's elections, never could consolidate their strength.

To the extent that this "conservative" tone of Congress carries over until 1960, oil and gas may fare better than earlier expected. There may be less punitive legislation enacted, and there might even be some that is helpful to the industry. But—the big reservation in all of this is that next year will be a presidential election year. So, anything can happen.

Some of the big issues that are coming up then will include the oil-gas depletion allowance, a "national fuels policy," a bill to eliminate public-utility control of independent producers' natural gas prices, oil and gas leasing law changes, an investigation of oil marketing practices, oil pipeline divorcement, and a host of other issues relative to oil and gas.

Fuels Policy Study is Foreseen

Concurrent resolutions in the House and Senate just missed being approved during the closing days of the current session, to set up a joint congressional committee to go into all angles of the fuels picture and to come up with legislation recommendations within a year dealing with oil, gas, coal and other fuels.

These were pushed hard by the coal industry—with one aim in mind. This is to obtain legislation that would prohibit the use of natural gas under boilers at "dump" prices, particularly during the "off-peak" summer months. Success was assured in the Senate for the resolution. Nearly half of the Senators were co-sponsors of the resolution. But, in the House, the companion resolution was stymied when the Rules Committee decided to table it for this year, because not enough consideration had been given to it.

The delay was requested and obtained by Rep. Thornberry (D., Texas), a member of the Rules group, and Rep. Boggs (D., La.). Apparently, there were requests by oil men to block the resolution and study, at least for the time being.

However, thoughtful oil and gas men may by next spring decide that an objective investigation by an impartial congressional committee is just what is needed in the current situation. The desire of coal men to block the low-cost sale of natural gas by the interstate pipelines to industrial consumers is not necessarily against the best interests of producers. And certainly it is in the interest of the homeowner, who now must pay higher gas prices to help "subsidize" the dump sales of gas to the large industrial consumers during summer.

Gas Bill Chances are Slim

The new Harris Gas Bill, introduced at the start of the session by the chairman of the House Commerce Committee, never had a chance. President Eisenhower, despite his past protestations that such a bill was badly needed, never lifted a finger to get the bill rolling this year. Harris never held hearings, knowing it would be futile without strong and continuous support by the White House. Significantly, however, Harris' new bill contained amendments that have been pushed by the coal industry on dump gas sales by the pipelines. Object would be to give the Federal Power Commission clear authority over such sales, something it does not now have.

Chances for the legislation seem even dimmer next year. It is extremely doubtful that either political party will sponsor anything that would directly benefit the petroleum industry. At most, Congress may hold off proposals designed to tighten federal control of producers' prices. Some liberals may push bills for utility-type control of gas producers.

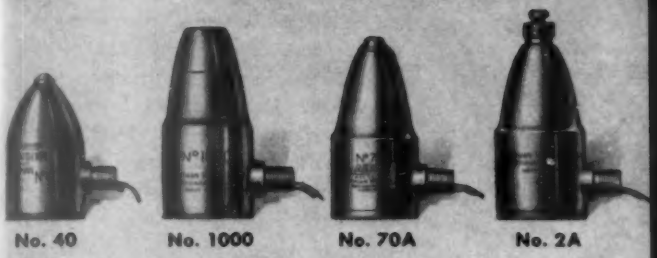
Depletion Attack is Planned

Biggest threat to the industry, though will be a concerted attack, particularly in the Senate, in 1960 to trim back the oil & gas depletion allowance. The vote this year—heavily lop-sided against any reduction—should not be taken as a sign that such an attack will fail in 1960. The House Ways & Means committee starts an extensive investigation soon of the tax code, in an effort to "broaden the tax base," with particular attention to incentives like the depletion allowance. Chairman Mills (D., Ark.) is neutral on the issue. He might even favor some action to trim back the allowance, at least for foreign production by American companies.

The investigation will get underway on Nov. 16. The subject of depletion is due for panel discussion on Dec. 1. Three oil men are scheduled to participate, from the Humble Oil & Refining Co., Texaco and the Standard Oil Co. of California.

Industry Influence is Weak

The question remains, however, whether the industry can succeed, as it has in the past, in holding off "bad" legislation. This year President Eisenhower pushed hard for a 1.5-cent increase in the gasoline tax to keep the huge highway program going—and it immediately ran into stiff opposition by democrats in Congress—and from oil men. But, look what happened. Despite predictions by Senate Leader Johnson (D., Texas) and House Speaker Rayburn (D., Texas) that this would never have a chance, Congress did finally approve a one-cent boost in the tax for 21 months.



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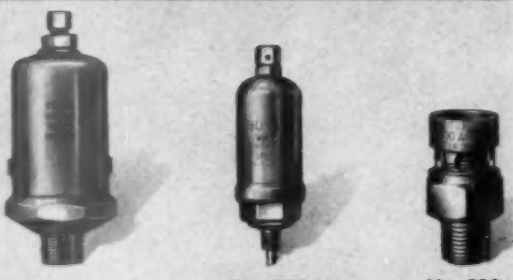

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Protect pumps, meter, product

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Bottom Outlet
Type

WITH OPW
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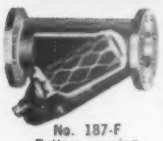
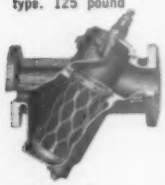


No. 187-F
Bottom opening
type. 125 pound

No. 387
Top outlet type.
125 pound.



No. 387-F
Top outlet type
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Names in the News

Frank J. Rau has joined the sales department, The Johnson Furnace Co., Cleveland, O. Previously, he had been with Henry Furnace Co. traveling sections of Ohio, Pennsylvania, West Virginia and Kentucky. He will work under the direction of James Crombie, vice president in charge of sales.

Charles B. Bendix has been made special representative for Valley Forge Metals Corp., Lansdale, Pa., fabricators of metal products, including boiler jackets. He will continue his long association with Nu-Way and Sundstrand Engineering Corp.

William H. Harpster and *Robert E. Dyer* have been named district sales managers at Long Island City, N. Y., and Tampa, Fla., by Sun Oil Co., Philadelphia. Harpster had been district manager at Tampa since 1947 and succeeds *Louis J. Ford* who has been named wholesale department manager in Sun's New York Sales region.

T. J. D. Dunphy has been named manager of marketing services, Air-conditioning Division, Westinghouse Electric Corp., Pittsburgh. He will be responsible for market planning, sales training, traffic, advertising and sales promotion. He announced that *C. E. Cannon*, previously director of sales training, would assume responsibility for sales promotion and publicity. Headquarters for the division are at Staunton, Va.

L. E. (Tom) Woolf has been named sales representative, Webster Electric Co., Racine, Wis. His territory will be Alabama, Delaware, Florida, Georgia, Maryland, Mississippi, New Jersey, North and South Carolina, Virginia, most of Pennsylvania, some areas of New York City, and Washington, D. C.

Frederick A. Wolthoff has been appointed assistant treasurer, Hartol Petroleum Corp., New York, N. Y. He has been credit manager since 1952 and became associated with the company in 1943.

Robert D. Bright has been named district manager for Ohio and surrounding states by Lima Register Co., Lima, O. He replaces Joe Hanger who resigned to enter private business. He will work with wholesale distributors and their dealers.

Stolley and Orlebeke, Chicago, named representative for Petrometer Corp., Long Island City, N. Y. The company's territory will include Metropolitan Chicago, Rockford, Peoria, Decatur and Northern Illinois plus Hammond, Gary and the South Bend area of Indiana.

Representatives for RCA mobile communications equipment in five areas have been named by the Communications Products Department, Radio Corp. of America. They are: J. F. Ottmar Co., Spokane, Wash., operating in northeast Oregon, northern Idaho and western Washington; Mobile Radio Service & Communications Corp., Shreveport, La., (Northwest Louisiana); Miami Mobile, Inc., Miami, Fla., (southern Florida); Rocky Mountain Communication Co., Inc., Denver (Colorado, Utah, Wyoming, western Kansas and western Nebraska); and Modern Electronics Laboratory Corp., Syracuse, N. Y., (central New York state).

Edward F. Eddy has been made manager of marketing, Amstan Supply Division, American Radiator and Standard Sanitary Corp., Pittsburgh. He was formerly manager, marketing services, for the firm.

ANNOUNCING

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Here comes the biggest improvement in trucking in decades . . . a revolutionary improvement that can make any truck route in America a far smoother road to bigger profits for you. Turn the page for the hottest news for truckers since coffee was invented!

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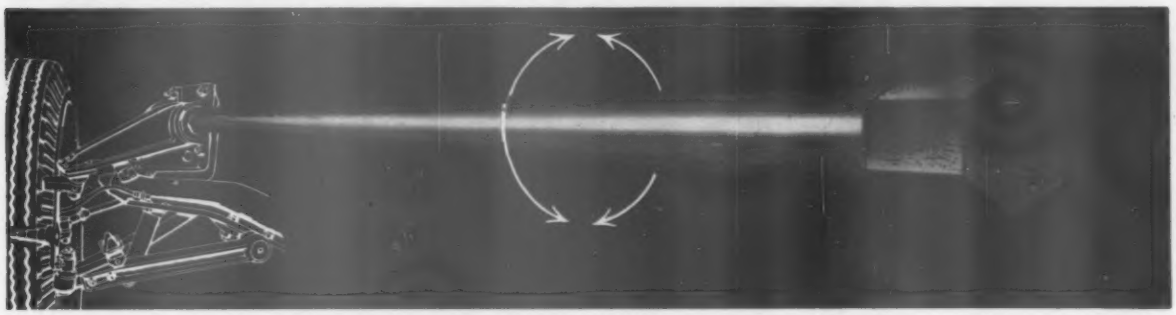
new torsion-spring ride!

THE SMOOTHEST THING THAT EVER CAME BETWEEN A ROAD AND A LOAD!



Independent front suspension with tough torsion bar springs . . . for trucks! Years in the making, this totally new suspension system protects everything from bumps and jolts . . . provides a new kind of performance that lengthens truck life, protects cargoes, reduces driver fatigue and cuts maintenance expense to new lows. Independently suspended, each front wheel steps cleanly over bumps. And the friction-free torsion bars work to absorb each jolt or jar; they flex freely, even on the smallest bumps, yet have the capacity to absorb severe shocks. The result is a truck ride so wonderfully smooth that it must be experienced to be believed! And it's now *standard* in *all* classes of 1960 Chevrolet trucks!

Three tailored-to-the-truck rear suspensions complement the revolutionary torsion bar independent front suspension. *In Series 10 and 20 models,* frictionless high-capacity coil springs ease the rear axle over bumps. *In Series 30* and 40 models,* a new two-stage leaf spring provides tailored springing action . . . *and in Series 50, 60, 70 and 80 models,* all-new variable-rate rear suspension gives spring resistance that adjusts automatically to cushion any size load.

**Optional at extra cost.*

Chevrolet trucks for '60

new style, new models!

NEWLY ENGINEERED FOR EXTRA SAVINGS THROUGH EXTRA STRENGTH!

Rolling in on revolutionary torsion springs, these 1960 Chevies are smooth as silk yet tough as nails . . . totally new in scores of profit-boosting ways! In the light-duty class, for example, big new Series 40 chassis-cabs and stakes add to your earning power with G.V.W's up to 14,000 lbs. And virtually every model offers a new lower-to-the-ground build (without sacrificing road clearance) which improves truck stability and makes cab entry easier. In the big-truck class, too, Chevy for '60 sports big-profit G.V.W.'s — up to 19,500 lbs. in middleweights and 36,000 lbs. in heavyweights — with stronger components including new frames with more massive bracing and brawnier side rails, new bigger brakes, and the latest in low-cost V8 or 6-cylinder power.

New Comfort-King Cabs! There's more comfort than ever before, with 5 inches more shoulder room, 6 inches more hip room and more leg room and head room, too! A new wider seat, combining S-wire, coil and flat spring elements, offers a new high in easy riding. And Chevy's new double-walled cowl and new double-panel roof construction provide extra ruggedness and long life.

New custom cabs! Available in all 1960 cab models, they include distinctive exterior door pillar and rear belt line moldings . . . handsome chrome grille (light-duty models) . . . new Super Cushion Seat with foam seat cushion and backrest . . . sunshade, armrest, cigar lighter and control knob trim.

New compact L.C.F. models! Twenty-six new Chevrolet Low Cab Forward models with short cab design allow for maximum length trailers and extra cargo space. Short wheelbase and turning radius give exceptional maneuverability. Bumper-to-back-of-cab dimension is as short as 90 inches. G.V.W.'s go up to 25,000 lbs. and new cab design makes entering easier. And in series 50 and 60 models you can choose 6-cylinder or V8 power.

New tougher built tandems! They're the best built Chevy tandems yet with Hendrickson RT320 rear suspension, two 16,000-lb. Eaton rear axles and 7,000-lb. front suspension (9,000-lb. front suspension optional, extra cost).

And they're POWERED to improve your profit picture, too! Chevy for '60 offers a *wide* choice of better-than-ever power plants; in every weight class you can choose from famous economy 6's or V8's that lead the field for efficient short-stroke design! Three big sixes and four advanced V8's allow you to match the engine to your job for top performance.

Chevy's 1960 trucks with *total newness* are now on display at your Chevrolet dealer's, so stop by sometime soon! . . . Chevrolet Division of General Motors, Detroit 2, Mich.

CHEVROLET

with total newness!

fuelcoil & oilheat

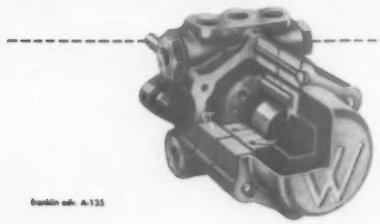
and only Webster ServiceSavers have it!

Webster engineers developed this amazing filter, then built the pump around it. Thousands in daily operation everywhere prove the merit of its advanced design . . . *Webster* **ServiceSavers** *with the rotary filter are as service-free as a fuel-unit can be!* Gone are troublesome screens, strainers, felt or paper filters — cleaning problems. This pump runs clog-free for a lifetime!

The reason is Webster's *exclusive* design — a rotary cleaner blade that renews the "filtering" surface 7000 times a minute. Particles larger than 125 microns are rejected by the filter. Only clean oil flows to the nozzle! Multiple filter blades match filtering action to capacity ratings.

Webster's expanded line of single and 2-stage **ServiceSavers** provide a capacity range from 7 gph to 75 gph. They replace any fuel-unit now on the market . . . mount and operate in any position, on any high pressure oil burner — without changing connections.

A COMPLETE LINE OF **ServiceSavers**



models: *single and 2-stage*
capacities: *7 gph to 75 gph*
pressures: *up to 250 psi*
speeds: *1450 to 3450 rpm*

Specification sheet FU-2 with full details on complete line available upon request.

INDUSTRIAL DIVISION
WEBSTER ELECTRIC
RACINE · WIS
our 50th year

. . . . Names in the News

Robert O. Goodykoontz, general manager of marketing, and *J. Prince Warner*, general manager of manufacturing, have been elected vice-presidents of Esso Standard Oil Co.,

Goodykoontz

Warner

New York. Goodykoontz has been general manager of marketing since May of last year. Earlier he served as assistant general manager of marketing, as manager of the company's Virginia sales division and as Southern regional manager.

P. H. Gauthier has been named contract sales manager for heating and airconditioning products, Perfection Industries, Division of Hupp Corp., Cleveland. He joins Perfection after serving five years with Remington Corp.

Bogart-Bullock Corp., Los Angeles 44, Calif., appointed southern California representative for L. J. Wing Mfg. Co., Linden, N. J., handling the complete line of air handling and power plant machinery.

Consolidated Supply Co., Baltimore, Md., appointed sales representative for Maryland, west to and including Frederick County but excluding Cecil County, and Washington, D. C., for The Rittling Corp., Buffalo, N. Y. Consolidated also will cover Sussex and Kent Counties in Delaware.

Willis Ditmanson has been named national parts and service manager, Motorola Communications & Electronics, Inc., Chicago. He will coordinate on a national scale the service organization which provides contract maintenance and other service aids to users of mobile radio and other communications networks.

...right down the line.....

U.S.-CARLIN pays off in PROFITS!

Any – and every – U.S.-Carlin Oil Burner you sell means dollars in your pocket. Outstanding quality features, consistently dependable performance, proved customer acceptance, and the unqualified backing of one of the best-known names in oil burners are the money-making reasons why you will find it pays to "line up with the line of advanced design." Ask your heating wholesaler today for full particulars.

CONDENSED SPECIFICATIONS

MOTOR – Long-hour duty with safety overload control. Complies with *NEMA* mounting specifications. 1/8 hp. (Models 400, 150F, 400S, 150SF-2, 500S-35); 1/6 hp. (Models 650, 700S-35, 800S-4); 1/4 hp. (Model 1200; 1/3 hp. (Models 2000S-5, 2000).

TRANSFORMER – Shielded to block radio and TV interference. 10,000 volt (12,000 volt on Models 2000S-5, 1200, 2000).

AIR TUBE – Steel with heat resistant air cone.

FAN – Precision balanced. Mounted directly on motor shaft.

NOZZLE – Stainless steel alloy. Hollow cone spray (Hollow cone or solid spray on Models 1200, 2000). Dual nozzles on Models 500S-35, 650, 700S-35, 800S-4, 2000S-5, 1200, 2000.

FUEL UNIT – Single-stage standard on Models 400, 150F, 400S, 150SF-2, 500S-35, 650. Two-stage on Models 700S-35, 800S-4, 2000S-5, 1200, 2000. Built-in strainer and pressure regulating valve. Capacity of strainer equals or exceeds maximum firing rate of burner.

SOLENOID VALVE – Combination delayed-opening and instantaneous cut-off oil valve standard on all "S" models, also 1200, 2000.

COMBUSTION HEAD – Models 150F, 400, and 650 have standard head with diffuser vanes formed at a fixed angle to establish air pattern. Model 150F (0.65 to 1.35 gph capacity) and Model 400 (0.65 to 1.00 gph capacity) have a series of adjustable openings in center of diffuser for regulating air delivery to shape the fire.

All "S" Models have "Shell Head" and finned collar for efficient mixture of air with oil. Models 1200, 2000 have High Temperature Combustion Head with finned collar for greater firing rate (Model 2000) and narrower fire.

ELECTRODES – Nichrome steel with full-glazed porcelain insulators counterbored for utmost safety. Flared, "Wide-arc" design permits heavier spark and assures positive protection during low voltage periods.

BUS BARS – Rigid heavy-gage brass (Models 400, 400S, 500S-35, 700S-35, 800S-4); phosphor bronze (Models 150F and 150SF-2); high tension leads (Models 650, 2000S-5, 1200, 2000).

HOUSING – Cast iron. Designed to assure efficient air delivery and quiet operation. Machined to rigid standards.

COUPLING – Universal type with neoprene center piece. (Flexible type on Models 2000S-5, 1200, 2000).

CONTROLS – Thermostat, Limit Control, and Stack Relay. Electronic Control set in place of Stack Relay on Models 800S-4, 2000S-5, 1200 and 2000.

ELECTRICAL CHARACTERISTICS – 115V-60 cycle. 1725 rpm. All models except 150F and 150SF-2 available with 230V-60 cycle on special order. Also a complete line of 110 and 220V-50 cycle models with capacities from 0.50 to 15.00 gph.

U.S.-Carlin Oil Burners are listed by Underwriters' Laboratories, Inc. and are approved under U. S. Government Commercial Standard CS75-56 where applicable.

MODEL 400 0.65 to 1.00 G.P.H.
Also available for flange mounting
MODEL 400S 0.75 to 3.00 G.P.H.
Also available for flange mounting
MODEL 150F 0.65 to 2.00 G.P.H.
Also available for pedestal mounting
MODEL 150SF-2 0.65 to 1.35 G.P.H.
Also available for pedestal mounting
MODEL 500S-35 3.00 to 4.50 G.P.H.
MODEL 700S-35 3.50 to 7.00 G.P.H.
MODEL 650 3.50 to 6.50 G.P.H.
MODEL 800S-4 4.00 to 8.00 G.P.H.
MODEL 1200 6.00 to 12.00 G.P.H.
MODEL 2000S-5 7.00 to 12.00 G.P.H.
MODEL 2000 10.00 to 20.00 G.P.H.
U.S. CARLIN

They Outsell because they Excel

THE CARLIN COMPANY • WETHERSFIELD, CONN.

MID-WEST REPRESENTATION — COMPLETE BURNER STOCKS AT CHICAGO

• for tank truck

• faster delivery

• less maintenance

• greater safety with

ardmore

• for tractor-trailer

HYDRAULIC DRIVE SYSTEMS

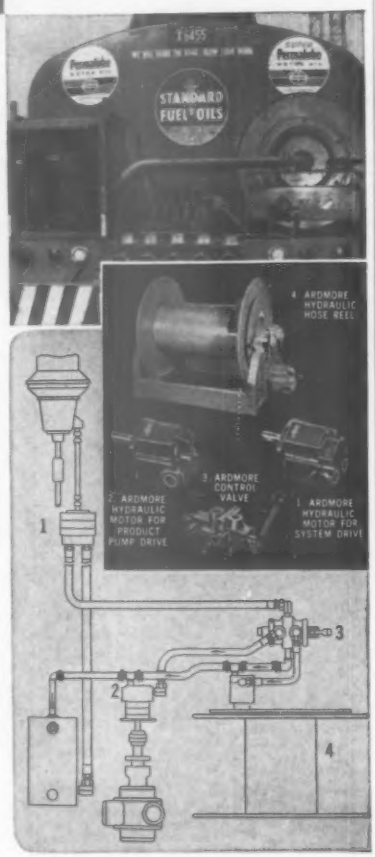
U.S. Patent No. 2,818,787

for product pump and hose reel drive

For every type of carrier from single or dual product delivery trucks to tractor-trailer transports, you'll find Ardmore Hydraulic Drive Systems offer tremendous advantages. Hundreds of new installations each year plus the continuing trouble-free years of service of earlier installations, prove what Ardmore equipment can do for you. For any product pump, delivered capacity is increased as much as 30%. Components such as product pump or meter are more ideally positioned for easier reel-compartment accessibility in operation and maintenance. Hydraulic hose reel drive gives maximum safety. Overall installation is easier since flexible hose replaces rigid piping and pipe fittings.

ARDMORE IS A PATENTED SYSTEM
The Ardmore design is exclusive. Only Ardmore can give you Ardmore performance features.

GUARANTEED FOR PERFORMANCE
100% guaranteed for performance as specified, providing the system contains all Ardmore components. Your inquiry for complete information is cordially invited.



ARDMORE PRODUCTS

1831 Shermer Road • Northbrook, Illinois
Eastern Office: 612 Commerce Road, Linden, N.J.
International Sales and Service

. . . . Names in the News

John H. Childs has been appointed general manager, advertising and sales promotion, Texaco, Inc., New York. He had been a vice-president and account supervisor of Cunningham & Walsh, Inc., advertising agency.

John M. Bals has been appointed general manager, Aurora Pump Division, Aurora, Ill. He has been associated with the company for the past 15 years during which time he has served as export manager, New York branch manager and division sales manager. He succeeds *Frank S. Main* who will continue to serve in an advisory capacity. Main had been president and general manager from 1936 until 1954 when the company became a division of the New York Air Brake Co. at which time he became general manager.

Clark R. Sterling has been appointed salesman, Pacific Steel Boiler Division, National-U. S. Radiator Corp., Johnstown, Pa.

Leslie L. White has been appointed eastern zone manager, national accounts department, Heating and Air Conditioning Division, Coleman Co., Inc., Wichita, Kan. He has been with the company since 1923 and for the past 12 years been manager of the Eastern branch in Philadelphia. Succeeding him is *Anton Hubert* who had been regional sales manager for the northeastern and southeastern states.

Murphey-Hessin Co., San Francisco, named sales representative in Northern California, for Granberg Corp., Oakland, Calif.

J. H. Picou will head the recently-formed combined advertising and sales promotion department, The Atlantic Refining Co., Philadelphia. *Richard Borden* will manage the advertising section and *E. R. Cox, Jr.*, the sales promotion division.

Joseph A. Donahue has been named manager of sales promotion, Crane Co., Chicago. He will be responsible for advertising-sales promotion activities along with catalogs and commercial research.

Carry only 4 Purolator filter refills for 98% of all filter replacements

And now is the time to protect every oil burner with a Purolator filter . . . protect yourself from emergency calls this winter

The fact that 4 Purolator Oil Burner filter refills take care of 98% of your oil burner installations is exactly half the story. There's also this: *now* is the time to check the filter on every burner you service. Why? Because dirt is being drawn towards the nozzle as furnaces start up these cool nights—and dirt-clogged nozzles account for most of your burner failures. You stop all dirt particles as small as .0005 of an inch with a Purolator filter. It actually has 5 times the dirt retention and flow capacity of the biggest competitive units. Give them that kind of protection now (it lasts at least a year without servicing) and this winter you'll be free from many of the usual annoying emergency calls.

One more thing: a simple cross reference chart has been worked out by Purolator that shows you which refills will fit all popular makes of filters. It's yours for the asking—and the coupon below makes it easy to ask, right now.

TO: PUROLATOR PRODUCTS, INC.
RAHWAY, N. J.

Please send me your oil burner filter cross reference chart.

*Name*_____

*Title*_____

*Company*_____

*Street*_____

*City*_____ *Zone*___ *State*_____

Filtration For Every Known Fluid

PUROLATOR

PRODUCTS, INC.

RAHWAY, NEW JERSEY AND TORONTO, ONTARIO, CANADA

fuel oil & oil heat

OIL FIRED HYDRONIC SYSTEMS From reliable primaries to fashionable room thermostats – call on General Controls. *Single source responsibility* for quality controls means easier ordering, faster deliveries, fewer call-backs. You get local warehouse stocks ... field service from 44 Factory Branch Offices. Send today for HEATING CONTROLS CATALOG describing the complete line of compatible controls for oil or gas-fired, warm air or hydronic systems.

BE QUALITY SURE ... ALWAYS SPECIFY GENERAL CONTROLS

GENERAL CONTROLS

Automatic Controls for Product or Process

Glendale, Calif. • Skokie, Ill. • Guelph, Ontario, Canada

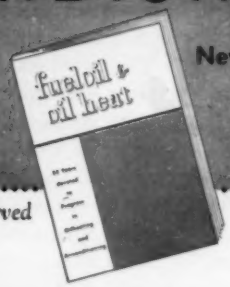
Nine plants—44 factory branch offices serving the U. S., Canada and Western Europe

The "Decor" thermostat ... for functional beauty. And there's a complete line of General Controls thermostats to improve any heating or air conditioning system.

PerfXray ... years of trouble free service behind this quality burner mounted flame detector. General Controls builds primary controls for every type of system.

Combination hydronic heating control incorporating water temperature control and circulator relay. General Controls supplies single and combination controls for every system.

Oilheating & Airconditioning
MERCHANDISING NEWS
2 West 45th Street New York 36, N. Y.



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Monthly Oilheating Trends

AUGUST continued the upward trend in oilheating installations with an estimated 72,893 domestic oilburners and units compared to 65,016 last year for a rise of 12%. For the first eight months the total installations are estimated at 371,466 or 14% above the corresponding months of 1958.

The August installations were divided: New Homes, 18,902; Replacements of old oilburning equipment, 24,962; and Conversions from other fuels, 29,029. For the full eight month period, the comparisons are New Homes, 122,474 this year and 106,221 last year; replacements were 131,350 compared with 99,037; and conversions from other fuels at 117,642 in 1959 are just a little below last year's comparable period of 119,877.

The factory shipment table shows in the first six months a gain of 30.6% over a year ago based on Census Bureau data with a small adjustment for non-reporting companies. However, it is well to point out that the Bureau has changed its method of calculating the total shipments from the sample it receives. If they were using the same methods as a year ago, the six month increase would be 20.6% or 10 points lower than they show by the new method. Thus, the true comparison is something under 21% growth in factory shipments and 14% growth in retail installations.

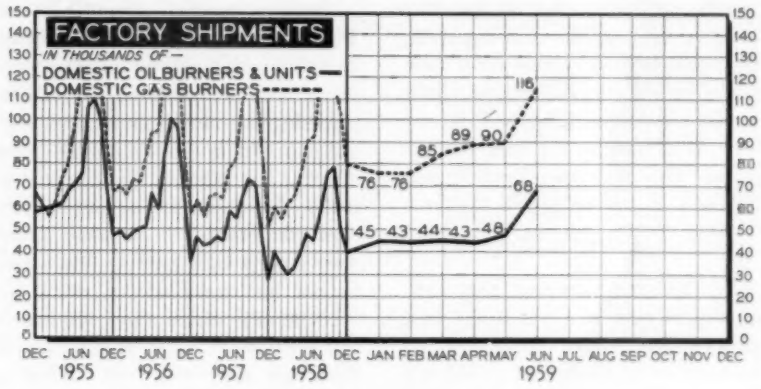
Central airconditioning installations by oilheating dealers in August are estimated at 2,021 which shows quite a drop from the 5,840 installed by this type of dealer in July.

Water heaters sold in August by oilheating dealers were approximately 1,131. This refers, of course, to the mechanical burner type usually with 1 gph firing rate.

Oilheating Stocks: Dealers were holding at the end of August approximately 68,374 domestic oilburners and units compared with 82,740 the previous month and with 80,607 a year earlier. Current stocks were divided: separate burners, 36,922; boiler-burner units, 12,991 and furnace-burner units, 18,461.

Factory stocks at the end of June were 53,589 compared with 54,044 a year earlier.

Tank Stocks: On August 31, oilheating dealers had in stock approximately 49,461 customer oil tanks compared with 49,925 a month earlier and with 27,411 a year earlier. There seems little question that the dealers have loaded up ahead of the steel strike.



August Minimum Retail Prices Key Dealers

	Aug. Avg.	July Avg.
Separate Burners	$314	$315
Boiler Burners	738	737
Furnace Burners	617	616

Price Index: Separate Burners 1947-49 is 100%

WHOLESALE

August	94.9	Six months ago	95.9
July	95.5	Year ago	97.2

RETAIL

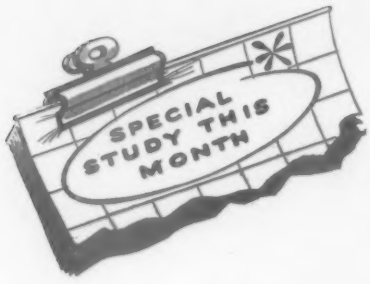
August	92.2	Six months ago	92.7
July	91.7	Year ago	92.4

Shipments of Oilburners and Units

Adjusted to include manufacturers other than those reporting to Census Bureau, FUELOIL & OIL HEAT's estimates of shipments are:

	JUNE			SIX MONTHS		
	1959	1958	Percent Change*	1959	1958	Percent Change*
Separate Burners	50,080	31,866	+57.2	210,067	148,756	+41.2
Boiler Burners	5,415	3,711	+45.9	19,645	16,525	+18.9
Furnace Burners	12,733	11,990	+ 6.2	63,665	59,168	+ 7.6
All Domestic	68,228	47,567	+43.4	293,377	224,449	+30.6
Commercial	3,819	3,368	+13.4	19,174	15,617	+22.8
Total	72,047	50,935	+43.2	312,551	240,066	+30.2

*The 1959 figures are not directly comparable to 1958 since the Census Bureau has changed its base from which total shipments are estimated by them.



How much are our customers bothered by seasonal ups and downs in price?

EACH YEAR there is a lot of comment, frequently unfavorable, over the fact that fueloil prices go up in the winter when folks need a lot of oil and go down in the summer when very few will buy. As long as we operate the industry in a completely free economy there's almost no chance to correct that unhappy situation, from the consumer viewpoint.

The whole problem is highlighted this season because prices have fallen so low particularly in Eastern metropolitan areas. There seems little question but that the economic levels of oilheating will push up to recover some losses as we get into the real winter.

We asked the reporting group this month quite a number of questions pointing up possibilities in improving the public attitude on this whole question. Our first approach was to inquire if the companies advertised in any way to dramatize the low summer prices. This was done by only one company in 16—or 6% of the total.

Direct Mail

We did find, however, that 23% of the oil men sent out direct mail pieces to the customers explaining that we are starting the heating season at a lowest price point in several years.

Of course, it has been rather recently that we have had the wide variations between winter and summer price with the natural result that the fueloil distributors have not yet found ways to make the most of what we offer. The coal industry has always had summer discounts for families that could take a whole season's supply in the summer. With this in mind about one-fourth of the reporting oilmen say that they have urged their customers to put in large tanks either originally or later to take advantage of summer bargains.

The actual users of the oil, the consumers, are probably not as much disturbed about the price changes as the distributors. In the experience of the reporting group, only a little over 5% of the customers register a kick. Of course, others may feel that way but only one in twenty speaks out.

Reassure Customers

Then we learn that whose who do complain can nearly always be satisfied by a reasonable explanation to show that the average price for a season is moderate.

Another question often asked is whether or not customers actually know what they pay for oil. The composite opinion among all the oilmen reporting this month shows that only one customer in four knows the price of oil at any point in the season. Actually, this impression is higher than most often found in consumer interview surveys such as those conducted for the National Fueloil Council.

In several cities they discovered that only one in eight oil users could quote the price they pay within a range of .4¢ a gallon.

We next asked the reporting group if they believed that the customers should be sent a letter from the dealer each time there is a change in the price of oil with some sort of explanation. Only 4% think that this should be done so it obviously is not a very practical idea.

There is always the question of how much a factor the price of oil might be in getting folks to buy an oilheating installation. The vote here from the reporting dealers shows 45% saying that oil price is a primary consideration and the other 55% saying that it is less important.

A little more than half of the group say that the original cost of oilheating equipment is the most important consideration in competing with gas installations . . . more important than the cost of the fuel.

That brings up the point as to how many gas users actually know the real price of their fuel—the oilmen estimate that about one in six actually knows what gas heating costs him. In other words, they rate this fuel cost knowledge as lower with gas than with oil. This is understandable because gas is bracketed and the actual rate is never the same for two months.

One big problem in oil price is the matter of publicity when there is a change. Two-thirds of the reporting oilmen say that it would be a great help if newspapers would stop reporting oil price movements. In fact, 17% of the reporting oilmen say that they have asked their local newspapers to cut out oil price stories and 7% say that they have had good luck in getting them stopped, although not permanently.

Restrict Releases

A third of the oilmen have asked their major oil suppliers if their news departments couldn't be persuaded to stop sending price change releases to newspapers. A good many folks have tried this without much luck. The answer always seems to be that the reporters hear rumors of a price change and call in to ask about it. The releases are designed to keep the facts straight.

Nevertheless, there is no question that the local fueloil distributor would be a lot happier without the releases.

Some comments on price changes from the dealers are as follows:

"I believe that fluctuating prices give a 'slow burn' to many of our customers who do not tell us directly; the less we talk about price changes the better off we are. Our customers say that low summer prices mean little because of their small storage." . . .

"Customers like the price now, but

feel it is illusory and meaningless except on one tank of oil." . . .

"The continuing price drop has our billing department in a dither. C.O.D. customers are going to be refunded, but when should we do it—October 1? We guaranteed them the lowest summer price and if the warm weather holds another drop is possible." . . .

"We object to the numerous small discounts and increases during the year; would much prefer a substantial discount or increase once or twice a year. This would prove very beneficial to the oil industry." . . . "The less said about price movement the easier it is to operate, except in the spring and summer when price is low." . . .

"Major oil companies market so little oil directly to the consumer that they don't have to listen to the homeowner's complaints. Consequently they have a 'public-be-damned' attitude." . . . "I believe a more stable price would be more attractive to the oil user. The industry's gain is negligible compared to the adverse publicity caused by keeping a customer guessing what he is going to pay for his oil." . . .

Need Stability

"It would be nice if the price of oil would go up once a year and down once a year. Constantly changing prices (especially in the winter) are our biggest headache in regards to price." . . . "There should be as much excitement when prices are reduced as there is when they are raised." . . .

"It seems that the local major companies never advertise when they increase price, so it would be better not to advertise any fueloil price changes." . . . "We use the summer discount as a collection aid; granting it only to current accounts. We indicate on statement that discount may be taken only if account is current." . . .

"It seems that the better the margin the more price cutting in our area." . . . "The best way to beat gas is to beat them at their own game by advertising." . . .

"Every phase of our industry has got to make a fair and reasonable profit to survive; therefore, during the summer when operating expenses are lowest we should favor our customers with this saving. It keeps our drivers on the payroll and the customer realizes that he will have to pay a little more when the weather gets colder and stormy and deliveries are more costly." . . .

"In this locality, there is no publicity during the summer months regarding the lower cost of fueloil." . . . "It has never been the practice of oil men in this area to grant special summer prices." . . .

"Price fluctuations are unfortunate and only serve to make the public price conscious." . . . "This summer we allowed our retail prices to fluctuate only within a narrow range." . . .

Oilburner Permits*

AUGUST 1959		8 MONTHS 1958	1959
3	Albany, N. Y.	17	9
14	Baltimore, Md.	232	166
78	Bridgeport, Conn.	420	388
..	Brooklyn	3,409	..
4	Columbus, O.	16	52
17	Detroit, Mich.	222	212
57	Elizabeth, N. J.	232	256
8	Freeport, N. Y.	87	97
30	Hartford, Conn.	411	493
24	Irvington, N. J.	103	144
49	Meriden, Conn.	232	257
29	Milwaukee, Wis.	305	176
..	Minneapolis, Minn.	115	..
..	Montclair, N. J.	79	..
4	Morristown, N. J.	..	15
27	Mt. Vernon, N. Y.	244	228
..	Newark, N. J.	454	..
..	New Bedford, Mass.	377	..
24	New Haven, Conn.	147	388
21	New Rochelle, N. Y.	79	105
26	Norfolk, Va.	173	157
..	Omaha, Neb.	35	..
7	Orange, N. J.	62	27
5	Passaic, N. J.	42	37
..	Paterson, N. J.	134	..
128	Philadelphia, Pa.**	804	716
38	Portland, Me.	278	296
127	Portland, Ore.	1,176	705
15	Poughkeepsie, N. Y.	51	68
..	Providence, R. I.	236	..
27	Richmond, Va.	205	252
111	Roanoke, Va.	663	483
49	Rochester, N. Y.	362	322
8	Rockville Centre, N. Y.	26	28
..	Salem, Mass.	164	..
44	St. Louis, Mo.	772	323
3	St. Paul, Minn.	35	41
8	Schenectady, N. Y.	24	48
..	Spokane, Wash.	157	..
56	Springfield, Mass.	449	420
14	Stamford, Conn.	88	121
32	Washington, D. C.	271	201
14	White Plains, N. Y.	102	92
6	Wilmington, Del.	104	79
40	Worcester, Mass.	445	450
15	Yonkers, N. Y.	143	92
	Totals	9,022	7,929
	Percent Change		—21.1

*Permits are not total sales in each market since none are reported from suburban areas, which normally account for 20% to 60% of total sales in each market; nor are they an accurate index where enforcement is lax.

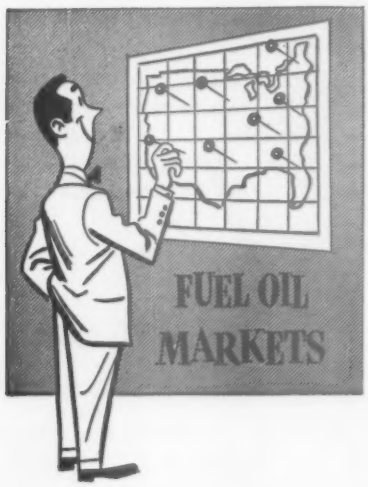
**Courtesy of "Philadelphia Inquirer."

Where is the

New home Market?

	No. of Permits Issued June	6 Mos.
Alabama	1,771	11,023
Arizona	1,424	13,108
Arkansas	301	1,944
California	21,536	124,901
Colorado	1,761	7,648
Connecticut	2,051	8,886
Delaware	319	1,020
District of Columbia	20	432
Florida	6,817	40,796
Georgia	2,504	11,245
Idaho	169	973
Illinois	6,640	29,405
Indiana	2,067	7,773
Iowa	959	4,024
Kansas	1,137	5,061
Kentucky	797	4,581
Louisiana	1,602	8,474
Maine	140	509
Maryland	2,523	14,653
Massachusetts	2,377	10,116
Michigan	3,975	19,036
Minnesota	1,880	8,954
Mississippi	294	1,762
Missouri	2,276	17,660
Montana	192	938
Nebraska	660	3,639
Nevada	287	1,920
New Hampshire	138	818
New Jersey	3,701	17,413
New Mexico	683	4,927
New York	8,361	53,242
North Carolina	1,219	6,963
North Dakota	213	930
Ohio	6,401	27,047
Oklahoma	992	5,534
Oregon	840	4,282
Pennsylvania	4,873	21,038
Rhode Island	242	1,258
South Carolina	379	2,418
South Dakota	255	990
Tennessee	1,787	8,769
Texas	6,216	41,079
Utah	825	4,053
Vermont	19	93
Virginia	2,493	13,974
Washington	2,022	12,602
West Virginia	409	2,047
Wisconsin	1,969	9,617
Wyoming	142	675

Greater detail on permits within the individual states is included in a booklet, "New Dwelling Units authorized by local Building Permits," issued monthly by the Bureau of The Census, U. S. Dept. of Commerce, Washington 25, D. C.



No. 2 Heating Oil (Including No. 3 & PS200)

Price per gallon as of September 10, 1959

	Tank Car	Tank Wagon†		Tank Car	Tank Wagon†
Portland, Me.	10.0(A)	14.6	Charleston, S. C.	10.1(A)	13.43
Boston	9.9(A)	14.4	Chicago	9.625*	14.1
Providence	9.9(A)	14.1	Detroit	10.25*	15.1
Hartford	10.15(A)	14.2	Cleveland	11.1*	15.6
New Haven	9.8(A)	14.3	Minneapolis	9.679	14.2
Syracuse	10.6	14.6	St. Louis	10.10*	14.9
Albany	9.5	14.0	Indianapolis	10.39*	14.9
New York	9.8(A)	13.2	Milwaukee	10.225*	14.9
Newark	9.8(A)	13.8	Des Moines	10.55	14.7
Philadelphia	9.8(A)	13.9	San Francisco	12.05*	14.8
Baltimore	9.8(A)	14.1	Portland, Ore.	12.1*	15.1
Wilmington, N. C.	10.1(A)	13.7	Seattle	12.2*	15.2
Washington	10.1(A)	14.4	Spokane	13.8*	16.8
Richmond	10.2(A)	13.8	Los Angeles	11.55*	14.3

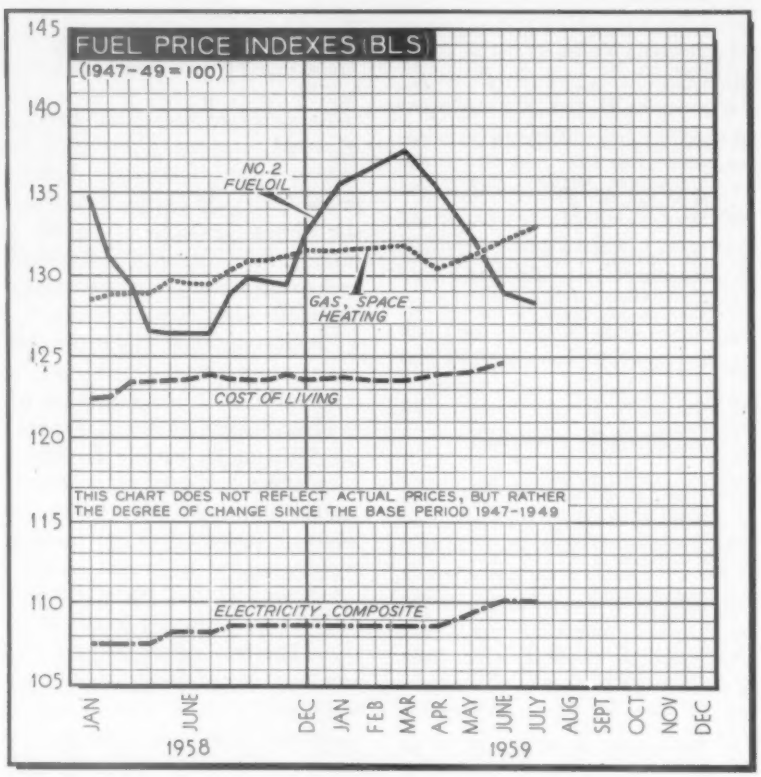
Tank wagon prices shown are for maximum one-time delivery discounts.
*Delivered.
(A) .50¢ vol. allowance.
†Tank car prices are typically those paid by fueloil distributors as a purchase price. On the West coast, this term more often indicates a retail sale to a large commercial account. This is often a half cent below tank wagon price.

THE PRICE TABLE this month continues to reflect high stocks and bargain prices particularly in cities along the Atlantic Seaboard. The lowest point is New York Harbor, down .5¢ from a month earlier and hitting 13.2¢ at the retail or tank wagon level, the lowest posting in a number of years.

The only other East Coast change is at Charleston which is up .13¢ tank wagon.

The Midwest had several ups and downs, all at the tank car posting. Milwaukee and Cleveland are up .5¢. On the other hand, Minneapolis is down .15¢, Detroit is down .25¢ and Chicago down .125¢.

The significant question everyone is asking in oil economic circles is whether the surplus stock levels are due to misunderstanding of the market, or to the fact that natural gas is taking an increasing share of automatic heating installations. Either way a surplus will always bring soft pricing which in time will tend to correct itself. If gas takes too much business, fueloil prices will naturally drop to levels making it hard to sustain the growth of gas. This, of course, is true only up to a point, because we do know that gas is growing faster than oil in spite of an average 9% fuel cost handicap.



Distillate Fueloils

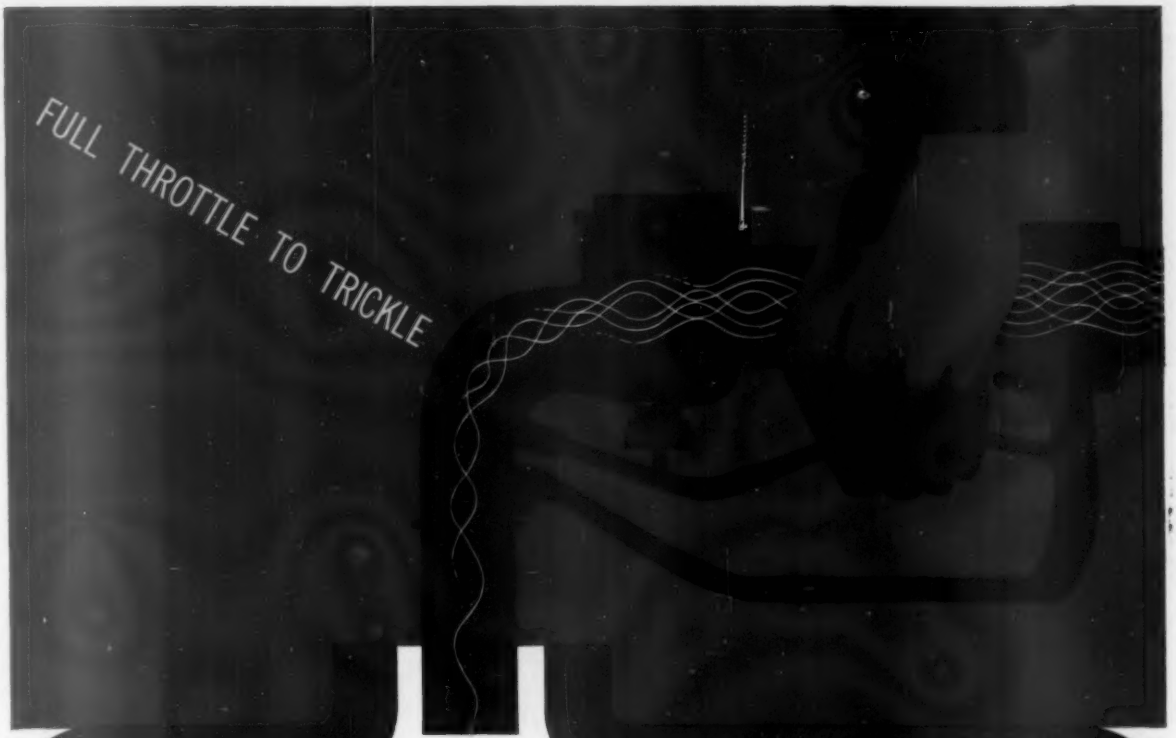
PRIMARY STOCKS*
(Thousands of Barrels)
East of Rockies

	Sept. 11 1959	Sept. 12 1958
East Coast	69,954	53,460
Midwest	50,071	49,065
Gulf Coast	29,987	25,942
Total	150,012	128,467

*American Petroleum Institute.

The New York *Journal of Commerce* on September 14 forecast an early price rise for light heating oils at the Gulf. They were predicting at that time 3/8¢ rise in spite of the fact that distillate inventories are 15% higher than a year ago. This writer feels that less oil has been moved this summer to local bulk storage than is normally the case in spite of the declining price levels.

The professional long range forecasting services are calling for a cold winter and quite a lot of the refiners are taking this seriously. It has been true from experience that a hot humid summer like the past one is followed by an extra cold winter.



LC M-7-N-X METER* GIVES YOU ALL THESE FEATURES

Top Accuracy: The M-7-N-X meter assembly has an air-actuated check valve to prevent air from affecting meter accuracy and an air eliminator to remove air from the system. Meets the requirements of the "Split Compartment" Test for all high-speed fuel oil delivery tank trucks.

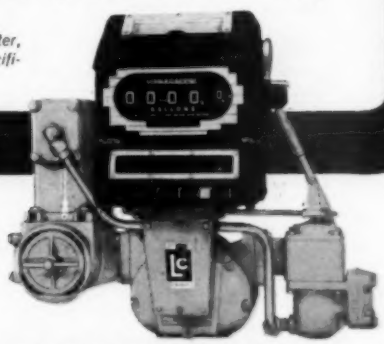
Fastest Possible Flow Rate: Discharge flow may be triggered from full throttle to trickle without adjusting the check valve or regulating truck engine speed. M-7-N-X is completely independent of pump pressure, pump efficiency, and discharge rate. Even the diameter of the fill pipe and size of vents do not affect meter's performance.

Economical Installation: M-7-N-X is an integral unit requiring no external piping or connections. Installation cost is low.

Rock-bottom Maintenance: Complete elimination of air by the M-7-N-X assures efficient pump performance at lower pressures. Equipment is not unnecessarily burdened—maintenance is minimized.

PERFORMANCE GUARANTEED! Order a new Liquid Controls M-7-N-X Meter Assembly today. Test it. Compare it with any other fuel oil meter. We guarantee its performance to be as stated.

*__The M-7-N-X Meter Assembly__ *consists of a 100 GPM meter, pre-set, printer, counter, pre-set valve, strainer, air eliminator, and air-actuated check-valve. Specification sheet available on request.*

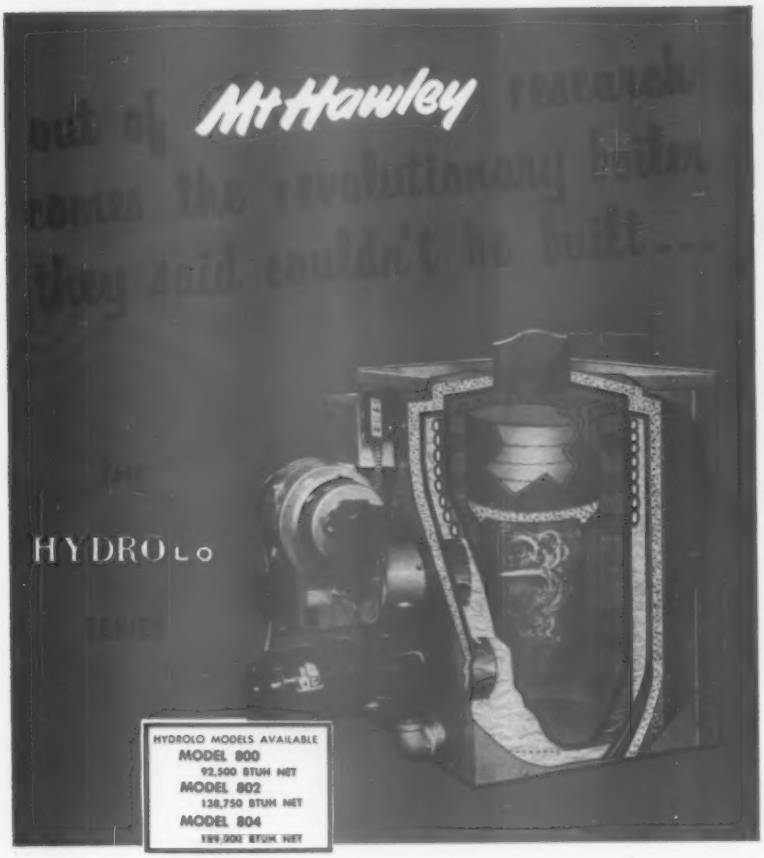


LIQUID LC CONTROLS

LIQUID CONTROLS CORPORATION

Commonwealth Avenue, North Chicago, Illinois

LC Meters...engineered for precision measuring of petroleum and commercial liquids



New a year ago — Proven today. This neat, little Hydrolo has been heating homes in some of the most frigid parts of the Nation — in Alaska, too. The Hydrolo has proven itself. And small wonder. Just look at these advantages . . .

√ **Greater efficiency**
ALL the heat is extracted in the water jackets WITHOUT a bulky inefficient combustion chamber.

√ **Lower initial cost**
Simplified construction and smaller overall size minimize construction costs.

√ **Lower maintenance costs**
The water-backed metal is a full ¼ in. thick — twice as thick as most boilers — meaning longer, trouble-free service.

√ **Lower fuel costs**
Hot gases MUST pass within ½ inch of heat-absorbing surfaces, so less heat goes up the chimney.

√ **Completely water jacketed**
Water surrounds the flame on all sides — and on the bottom. This means MORE heat absorbtion — and a cooler exterior. Now even WOOD FLOORS are SAFE.

√ **A space saver**
The Model 800 stands only 29 in. low and higher output models are only slightly larger.

√ **All models of the Hydrolo Series are A.S.M.E. constructed.**

Try it . . . prove to yourself that like all good things, COMFORT comes in small packages.

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Indianapolis, Indiana

Oil Heat Exposition Space reserved by over 100 Firms

MORE THAN 100 booths have been reserved by oilheating exhibitors for the 23rd National Oil Heat and Air Conditioning Exposition scheduled for April 4-7 in the New York Coliseum.

R. S. Doherty, A. W. Cash Valve Manufacturing Co., is chairman of the Exposition committee. The show will be sponsored by the Oil-Heat Institute of America. Firms interested in available space should contact the OHI, 500 Fifth Ave., New York 36.

Jersey-Humble Merger is first consolidation Step

ULTIMATE CONSOLIDATION of all producing, refining, marketing and marine operations of affiliated companies in the United States was begun by Standard Oil Co. (New Jersey) with the merger of Humble Oil & Refining Co.

Operations to be affected are The Carter Oil Co., Esso, Oklahoma Oil Co. and Pate Oil Co. All of these are 100% owned by the Jersey Company which owned 98.27% of the Humble stock.

All affiliates will be combined eventually in one corporate entity under unified management. However, initially the units now operating as individual companies will continue to operate under their present names and management as divisions.

A new company, Humble Oil & Refining Co., Delaware, will be the surviving corporation.

Commodity Standards Div. issues commercial List

A NEW LIST of Commercial Standards revised to July 1, 1959 is now available from the Commodity Standards Division, U. S. Department of Commerce, Washington 25, D. C.

The new index lists standards under 22 classifications including heating, ventilating and refrigeration; electrical and mechanical equipment; and pipe and fittings. Single copies are available from the Division without charge. Ask for Catalog No. 987.

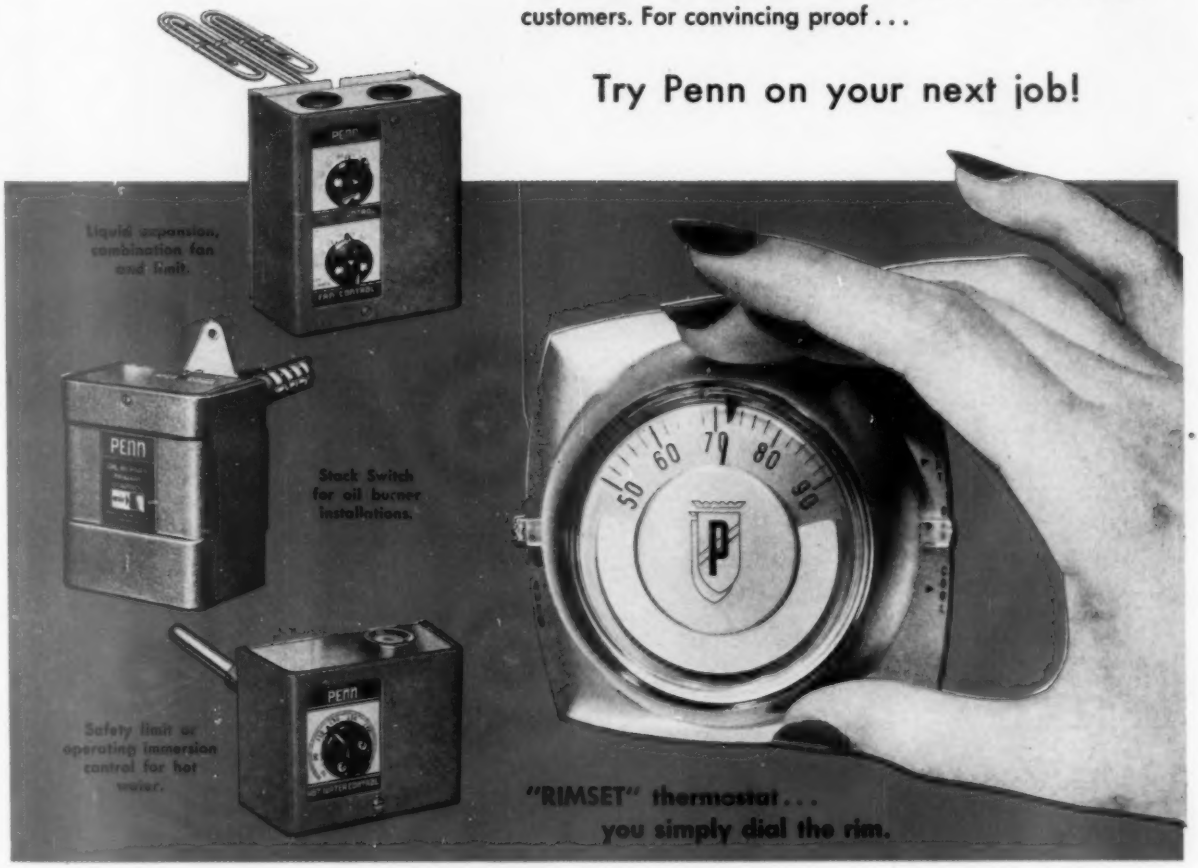
WHY MORE DEALERS
are using Penn heating controls!

Ask any dealer who has installed the Penn "RIMSET" thermostat and he'll tell you . . .

It has features found in no other thermostat. It is easier to set, easier to read . . . simply dial the rim, the scale remains stationary. It is easier to install . . . leveling is not essential. It has snap-acting contacts . . . no chattering to cause undesirable "on-off" operation. It is so versatile . . . various subbases available for 12 different heating-cooling jobs. It has modern styling and beauty . . . blends with any room decor.

And, he'll tell you . . . Penn heating controls deliver the trouble-free performance that creates better-satisfied customers. For convincing proof . . .

Try Penn on your next job!


Liquid expansion, combination fan and limit.
Stack Switch for oil burner installations.
Safety limit or operating immersion control for hot water.
50 60 70 80 90
"RIMSET" thermostat . . . you simply dial the rim.

PENN CONTROLS, INC. Goshen, Indiana

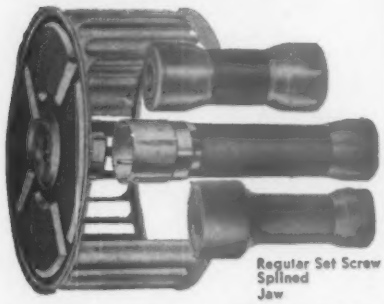
EXPORT DIVISION: 27 E. 38th ST., NEW YORK, N.Y.

AUTOMATIC CONTROLS FOR HEATING, REFRIGERATION, AIR CONDITIONING, APPLIANCES, PUMPS, AIR COMPRESSORS, ENGINES

QUALITY is our business .. without *any* compromise

***AND ONLY* Guardian GIVES YOU ALL THREE —**

1. FLEXIBLE COUPLINGS



Regular Set Screw Splined Jaw

Only Guardian gives you these features—

- ROLL SPINNING—Exclusive process joins all three components at one time—while in final operating alignment.
- BRAIDED RUBBER—Ground to absolute true concentricity. Furnished in BUNA-N TUBE and NEOPRENE COVER. Lateral and angular alignment requirements fully met.
- ONE-PIECE DESIGN—Minimizes assembly and handling costs. Made to exact lengths required.

Over 5,000,000 Guardian couplings are on original equipment. This is your assurance of highest quality and universal acceptance in the field.

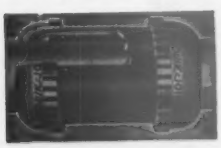
2. OIL TANK VALVES

No. 1910 B

Check These Superior Guardian Features—

- Metal-to-metal seating.
- Highest quality machined bar stock.
- Greater wall and body strength.
- Fusible linkage available in all designs.
- Valve designs for every type of installation.

3. QUIK JOINT



Steel compression fittings for connecting steel pipe.

Patent No. 2,685,460

- Eliminates threading of pipe.
- Decreases cathodic corrosion and electrolysis.
- Guaranteed for pressure up to 2000 P.S.I.
- Allows 7° angular deflection.
- U.L. approved for oil and gas.

Write for free descriptive literature.

Guardian PRODUCTS CORP.
COUPLING DIVISION

Dept. F-109 1215 East Second Street
MICHIGAN CITY, INDIANA

Hart Heat Division buys Mt. Hawley Burner Dept.

ALL THE INVENTORY and production tools pertaining to the oilburner models manufactured by the Mt. Hawley Mfg. Co. have been acquired by the Hart Heat Division, Avery Farm Machinery Co. Both companies are located in Peoria, Ill.

The Mt. Hawley factory now will be used exclusively for making the present line of residential heating boilers. The company is a wholly-owned subsidiary of Bryant Manufacturing Co., a division of Carrier Corp.

Under this acquisition, the former Mt. Hawley Models G-2 and G-4 will be offered as Hart G-2 and G-4. Two models for commercial and semi-industrial use with electronic controls as standard equipment will be continued as Hart Models G-6 and G-8.

Thus, Hart jobbers and dealers will be able to offer oilheating equipment covering the range from .65 to 18 gph.

Earl K. and Lloyd F. Smith operate Hart Heat Division.

BRI plans Fall Conference in Washington, Nov. 17-19

THE WAY in which buildings will be heated and cooled in the next few years will be a major topic of discussion at the Building Research Institute's Fall Conferences, scheduled for November 17-19 at the Shoreham Hotel, Washington, D. C.

John Everetts, Jr., Charles S. Leopold Engineers, Philadelphia, is chairman of the program, "New Methods of heating Buildings," scheduled for a full-day session on the opening day. New air heating methods, new wet heating systems and new radiant heating systems will be presented by researchers in these fields.

Also scheduled for discussion are electric heating systems and a progress report on solar heating. Registration material may be obtained from the Institute at 2101 Constitution Ave., Washington 25, D. C.

Device to study Ozone is patented by API

AN APPARATUS for analyzing the ozone content of the atmosphere has been patented by the American Petroleum Institute, New York, as part of its continuing research into the problem of air pollution.

As with all patents resulting from API research projects, the ozone analyzer is dedicated to the "full, free and unrestricted use of the public."

❖

William C. Wetherstine, Jr., named sales representative in the Philadelphia, eastern Pennsylvania, southern New Jersey and Delaware territory for the Steel Boiler Dept., Burnham Corp., Irvington, N. Y.

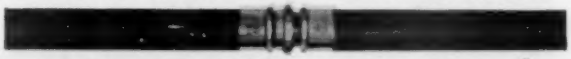
Malcolm Black & Co., Inc., New York City, appointed eastern sales and service representative for Hidy Brown Recorder Co., Cincinnati, O.

Drivers heading toward the Bayonne Bridge from the New Jersey Turnpike are able to read on three successive tanks the words, "Oil heats best." Coastal Oil Co., Newark, N. J., recently added the message when repainting terminal tanks at Port Newark, N. J. (Editor's note: If you are driving backwards it still reads as well as it does forwards, "Best heats oil."

LARGEST SALES FORCE ANYWHERE IN U.S.

Day-to-day availability of Scovill salesmen and technicians assures finest service and advice! When you specify fuel oil and gas pump couplings by Scovill, the technical advice and services of the industry's biggest sales force become immediately available. You get expert, personalized service when and where you want it. You get *fast* delivery, too . . . all orders are processed the day received.

Every size is always available for immediate shipment. That's because Scovill makes a complete range—from ¾" to 3" in fuel oil couplings . . . and all standard sizes in gas pump couplings. For full details, write: Scovill Manufacturing Company, Hose Coupling Department, Waterbury 20, Conn.



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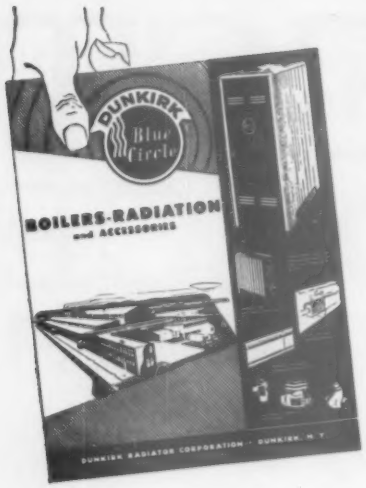

Send for this NEW BOOK and get your DUNKIRK Profit Story

● Complete lines of cast iron boilers cover the entire household and light commercial markets. A line that provides every advantage and economy of Hydronic heating in Ranch, Split-Level, and Multi-Story installations. Steam and hot water boilers with built-in tankless hot water heaters,—for new buildings and modernization. Complete lines of baseboard and slender radiators and accessories give you a one-source Profit Package with simplified ordering, quick delivery, lower inventory and investment.

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Letters to the Editor

L. J. WING CO.
Linden, N. J.

Editor:

Both you and the Dalton Oil Company are to be congratulated for the article "Give 'Em the Air" in the September issue. The importance of fresh air makeup to the boiler room, to replace that which is being removed up the stack or by other exhausts, can never be minimized.

The partial vacuumizing of boiler rooms can create a definite death hazard, particularly with gas-fired boilers. At the very least, it creates combustion problems, soot, smoke (both within and without the boiler room), and high fuel and servicing costs.

However, the Dalton's solution does not go far enough. While it may work in a high percentage of cases, the one or two exceptions would be enough to involve them in possibly extensive personal and property damage claims.

Some Shortcomings

The shortcomings are these. First, if the negative draft in the boiler room approaches the draft effect of the chimney, the furnace will become pressurized and flue gases will pour out into the boiler room through any point in the flue system which is not completely gas tight. Thus, considering the extreme effect of a tightly-sealed house, and gases exhausting through the stack, an equilibrium suction would be created in the boiler room close to the barometric damper which will exactly match the suction produced by the chimney. With no differential, there will be no flow up the chimney.

However, with outside air brought directly to the burner fan through a sealed duct, a goodly percentage of this additional volume of gases would leak out into the boiler room with subsequent soot and smoke damage and possible asphyxiation.

Second, assuming we do not have

IT DOES YOUR THINKING FOR YOU

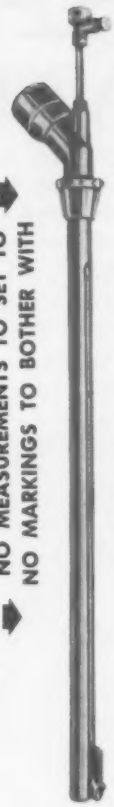
WHISTLES WHILE YOU FILL

CARRIES ITS OWN VENT

$44.50

YOUR MONEY BACK

IN 30 DAYS — IF YOU ARE NOT COMPLETELY SATISFIED.



NO MEASUREMENTS TO SET TO
NO MARKINGS TO BOTHER WITH

NO MISTAKES — NO SPILLS

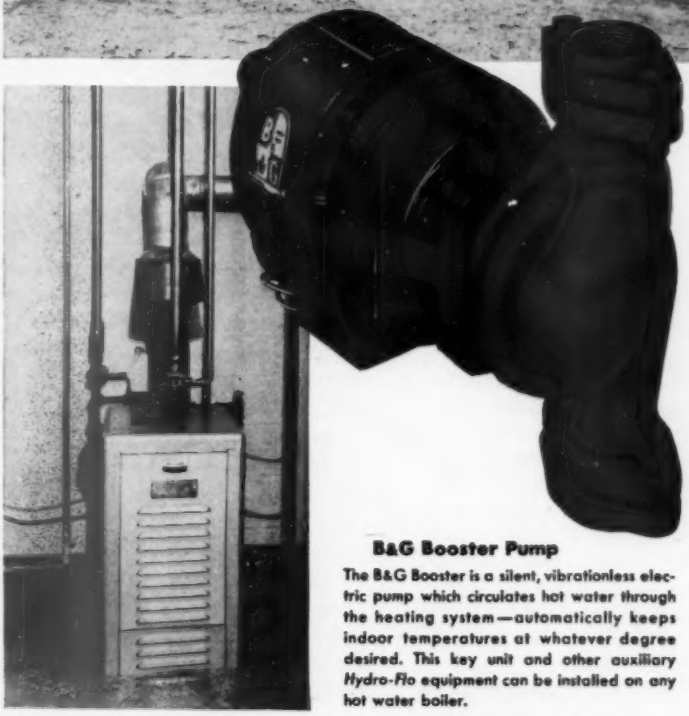
If you only use it once a day, it will more than pay for itself in time saved. You can fill underground tanks in half the time. New Vent Head eliminates all trapped vent problems. You just fill until the whistle stops.

WEIGHS LESS THAN 6 LBS. CLIP THIS AD TO YOUR LETTERHEAD—TELL US HOW MANY YOU WANT. WE WILL SHIP THEM IMMEDIATELY.

TIME SAVING FILLS, INC.
Phone York 6119
140 W. Market St., York, Pa.

14,000 JAM THROUGH MODEL HOME...

SEE HOW *Hydronic** SYSTEM DOUBLES USUAL LIVING AREA



B&G Booster Pump

The B&G Booster is a silent, vibrationless electric pump which circulates hot water through the heating system—automatically keeps indoor temperatures at whatever degree desired. This key unit and other auxiliary *Hydro-Flo* equipment can be installed on any hot water boiler.

Hydro-Flo heating plant takes much less space than a refrigerator.

M & I Supply Co., Muskegon, Michigan, sponsored this home to show builders how a properly designed hydronic heating system could produce 2400 sq. ft. of usable floor space in a 1200 sq. ft. house.

This show home has three bedrooms, one full and two half baths, living room, separate dining room *and completely usable basement.*

Full use of the basement was made possible by the hydronic heating system. It includes a family room, playroom, half bath, laundry, hydronic heating plant, water heater and storage areas. The playroom floor is so warmed that young children can play in the coldest weather without need for extra clothes.

The basement is on one zone and the first floor on a second zone, both thermostatically controlled.

Mr. L. M. Van Kersen, of the M & I Supply Company, says, "The basement area created the most excitement for both husband and wife. The direct result is that in 90% of the homes we have laid out, complete heating of the basement has been specified."

**Modern hot water heating.*

"Hydronic Homes" sales promotion for builders

Every builder should see this comprehensive program of ideas and sales helps for utilizing the outstanding and exclusive advantages of *hydronic heating.* There's no obligation in getting all the facts—write today.

Hydro-Flo® SYSTEM

BELL & GOSSETT

COMPANY

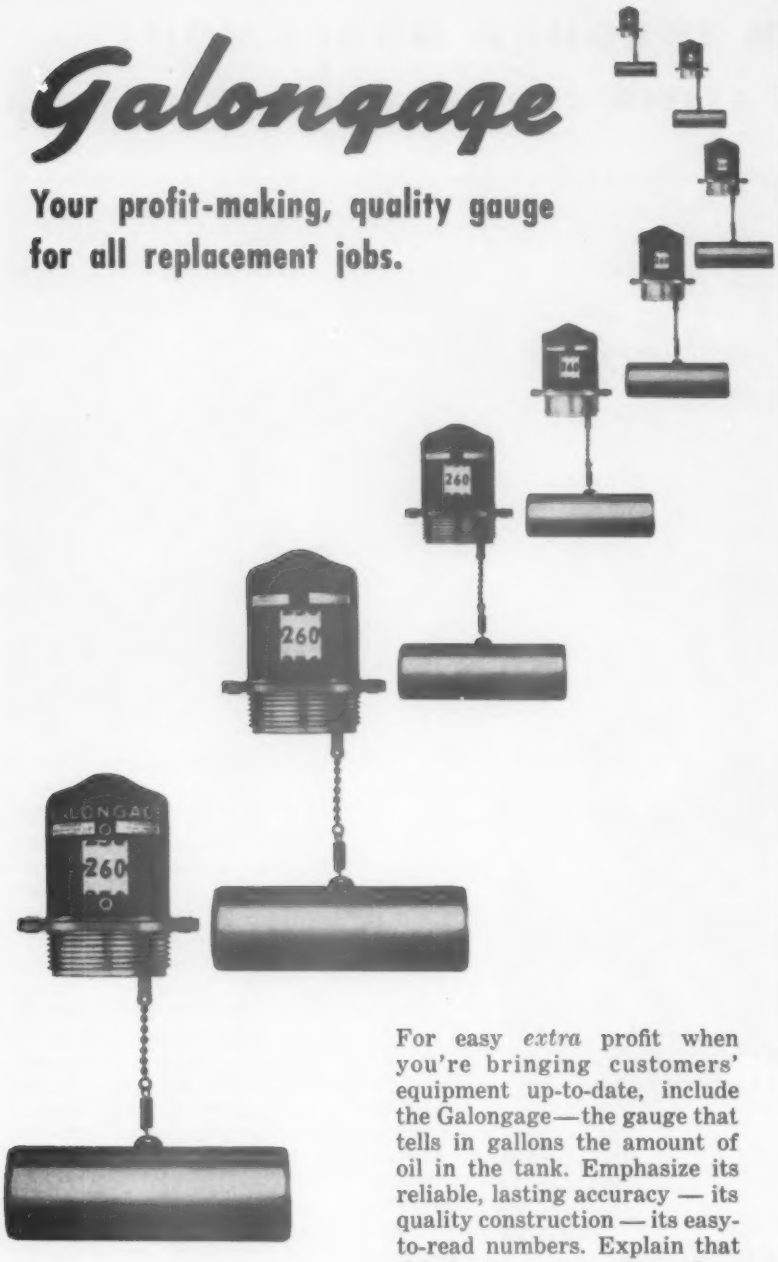
Dept. FX-7, Morton Grove, Illinois

Canadian Licensee: S. A. Armstrong, Ltd., 1400 O'Connor Drive, Toronto 16

fuel oil & oil heat

Galongage

Your profit-making, quality gauge for all replacement jobs.



For easy *extra* profit when you're bringing customers' equipment up-to-date, include the Galongage—the gauge that tells in gallons the amount of oil in the tank. Emphasize its reliable, lasting accuracy — its quality construction — its easy-to-read numbers. Explain that this better gauge costs only a little more — that it's the logical modern replacement for any other previously installed gauge.

In addition to your assured sales profit, you'll find the Galongage is easy to install, less expensive to ship, and packaged to fit easily into a serviceman's kit.

Galongage
is a product of
APPLIED MECHANICS COMPANY
381-385 CONGRESS ST., BOSTON 10, MASS.

the condition of a tightly-sealed house so that there is some slight infiltration through windows and doors, still the additional friction drop of the inlet duct may be sufficient to decrease the volume capacity of the fan to the point where it could be insufficient for proper combustion. Thus, even though the duct may be of sufficient size for minimum friction loss, the possible inadvertent blocking of the fresh air intake on the outside of the house, with no other means of getting air to the fan, would create the combustion problem.

Fixed Opening

The only and proper answer to this problem is a fixed opening from the outside into the boiler room. This opening should have a free unobstructed area of at least 12 square inches per gallon of oil burned. If other exhaust equipment, such as clothes dryers, are in the same sealed area as the boiler, the opening will have to be increased or other openings provided to provide one square foot area for each 400 cfm exhausted from the area. Thus, a clothes dryer exhausting 200 cfm requires an additional free area of 72 square inches. The outside of the opening should, of course, be weather-protected and if louvers are used, the area must be increased to compensate for the thickness of the louvers so that the desired net free area is maintained.

If the cold drafts could be objectionable in the winter-time, it would be preferable to locate the opening at the back of the boiler. For further relief, an inside duct could be located along the wall so that the cold air is brought down within a few inches from the floor.

If the trend to tightly-sealed houses continues, it could well be mandatory that building codes be revised to assure proper fixed outside openings being provided.

It may be comforting to the oil-heating industry to note that this problem is even more acute with gas firing. Not only does the outside opening have to be four to five times larger for the equivalent Btu input, but the lack of outside openings creates

McDONALD'S NEW Vapor Tite FILL SYSTEM IS ESTIMATED TO SAVE SOHIO* $30,000 TO $40,000

. . . and cut home fuel delivery time 7 to 10 minutes per call

McDonald's new Vapor-Tite fill system combines a vapor-tite fill tube with a McDonald Fuel Oil Nozzle. One unit goes on each truck. *No adaptors are needed.* This eliminates costly material and labor expense involved in placing adaptors on the customer's fill pipes. With a McDonald Vapor-Tite fill system on the SOHIO trucks, home fuel oil deliveries are made quickly and easily . . . overflow and dripping are eliminated. It is estimated that these features of the new McDonald Vapor-Tite fill system will save SOHIO $30,000 to $40,000.

Here's how it works

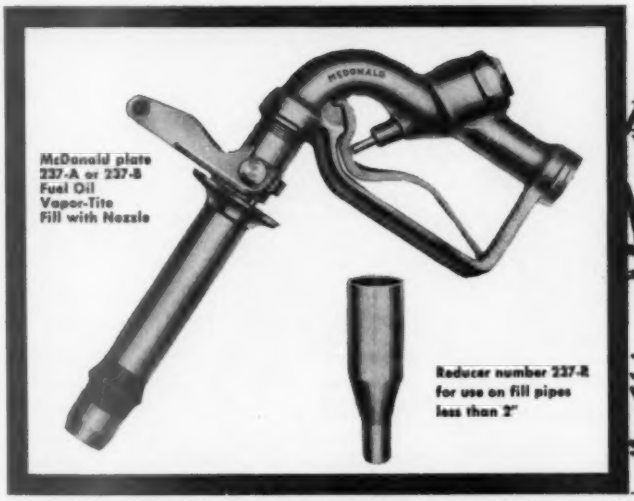
When fill is to be made, simply drop the tube into the fill pipe and press down on the handle. The composition sealing sleeve expands and forms a vapor-tight connection with the inside of the pipe.

No chance for vapor to escape and cause a hazard. McDonald's Fuel Oil Nozzle combines rugged design with light weight. Offers effortless operation, chatter-free opening and closing. Contains McDonald exclusive shock eliminator — a special shock mechanism that preserves the nozzle, protects the line, pump and all other connection parts from damage due to sudden shock.

McDonald Vapor-Tite Fill Fuel oil systems are equipped with either aluminum or bronze nozzles. 1-1/4" and 1-1/2" sizes. Special reducer is available for fill pipes less than 2" size.

For complete information on McDonald's new Vapor-Tite Fill system write today.

*Dayton Division



SEE THE McDONALD VAPOR-TITE FILL SYSTEM DEMONSTRATED AT THE NAOEJ IN MINNEAPOLIS, SEPTEMBER 27, 28 AND 29, BOOTH NO. 63

OVER A CENTURY OF SERVICE SINCE 1856 McDonald YESTERDAY-TODAY-TOMORROW

A. Y. McDONALD MFG. CO.

DEPT. FO-1005, 12TH & PINE DUBUQUE, IOWA

Two Ways to
Bigger Profits!
NOW at
NEW LOW PRICES!

Federal Filter

Look at these unsurpassed benefits. Federal's 16 extra-large filter pockets trap the contaminating impurities found in fuel oil and prevent clogging of burner nozzles. This means trouble-free furnace operation and the end of expensive service call-backs. One model handles all filtering jobs, whether pressure or gravity type.

Draft King

Look at all these money-saving features! Draft King turns flue gases into perfect heating combustion, not chimney clogging soot. Maximum draft provides full burning benefit of fuel and eliminates costly fuel waste so common with poor chimney drafts. Made of either all-weather galvanized steel or aluminum.

Show them, talk about them, sell them . . . they're PROFITABLE!

for information write to
NORWOOD PRODUCTS CO. • LUVERNE, MINN.
A division of A. R. WOOD MFG. CO., Luverne, Minn.

more possibly deadly conditions. At least, the odor of flue gases from oil could be sufficient to warn occupants.

GEORGE G. NASH

THE MICHAEL HOFFMAN FUEL CO.
Bridgeport 1, Conn.

Editor:

This refers to an article in the September issue concerning methods of introducing primary air to an oil-burner fan.

I have had considerable personal experience in the Midwest with the type of equipment described.

The big problem here is how to get a duct from the burner to the exterior wall and still maintain some semblance of neatness. Due to the fact most units are located in the center of the house, or at one end of the building in the center, several lengths of duct are needed. They are supported by baling wire from the basement rafters.

In the midwest area, where 80% of the heating plants are warm air and there are thousands of slab homes with utility rooms and central return air systems, we found a neater way to solve the problem. We simply cut a hole into the attic crawl space and inserted a decorative register. This gave plenty of primary air.

In basements we simply pulled out a pane of glass and installed a small screen with adjustable shutter.

One good method in new, or replacement work, where hot air is involved, is to provide a fresh air duct in the return. Made of neat, square duct, this branch pulls in 5% outside air (5% of the total needed air volume). The result is a pressurized house.

Dalton deserves a Gold Star for arriving at the proper conclusions (I agree 100% with Don Blake's theory) but I believe there are better answers than stringing pipe all over the place.

BURT MASON

❖

C. C. Gregory, Utica, N. Y., named sales representative for Gorton valves in upper New York state by Gorton Heating Corp., Cranford, N. J.

NEPTUNE PETROLEUM METERS

Complete Truck Metering System in One Weight and Space Saving Unit

Nothing extra to buy...only 3 connections to make

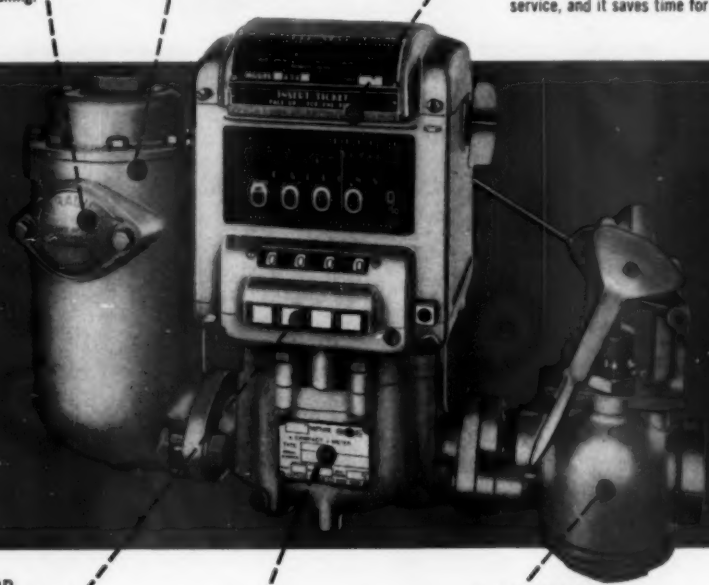
Only Nepture gives you *all* these features in so little space, with so little weight. Everything's built into one compact unit...a complete metering system. Most Neptunes can be assembled with right-hand, left-hand or angle flow, so they pack neatly into any position in the compartment.

Neptune meters permit more pay-load...with no "extras" or accessories to buy...less chance for leaks...less chance for improper installation.

Add Neptune's fine reputation for sustained accuracy and you have the big reasons why this Neptune meter is the oil marketer's most sought-after business friend.

All sizes. Ask your Neptune Equipment Jobber or Tank Truck Manufacturer for details.

Look what's built into your NEPTUNE...



STRAINER:
Removes sediment, scale and dirt from liquid, averting stoppages and preventing undue wear or damage to meter. Easy access for cleaning.

AIR RELEASE:
This patented Neptune design removes air that may be entrained or sucked into liquid before it enters the meter. High efficiency is absolutely necessary for accuracy.

PRINT-O-METER:
Automatically provides a meter-printed receipt showing number of gallons delivered. Customers appreciate this proof of honest service, and it saves time for you.

AUTO-STOP QUANTITY CONTROL:
Operator sets register for any desired quantity by pushing these buttons. Tripping device actuates Auto-Stop Valve automatically when pre-set gallonage is delivered.

MEASURING CHAMBER:
Positive displacement type. Only one moving element. Measures liquid by volume. Most widely preferred for sustained accuracy and long life.

AUTO-STOP VALVE:
Automatically shuts off flow when correct quantity has been delivered. Actuated by tripping mechanism in Auto-Stop register. Avoids spillage and overmeasure. Double-trip valves on larger meters shut off high flow smoothly, quietly, with high accuracy.

NEPTUNE METER COMPANY **neptune** 19 West 50th St., New York 20

for a better measure of profit

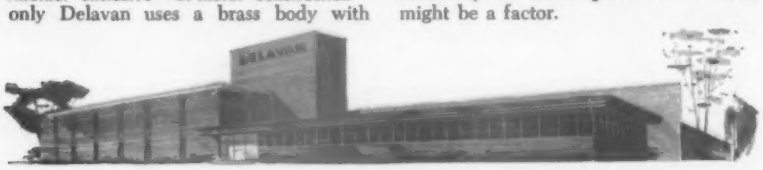
BRANCHES AND JOBBERS IN ALL PRINCIPAL AMERICAN CITIES

DELAVAN

TYPE "W" NOZZLE-the industry's only "all purpose" nozzle

Delavan's type "W" may be used in any burner (from .50 GPH thru 1.35 GPH) regardless of air pattern. This means you can eliminate the practice of trying two or three nozzle patterns to get a good fire. Now, *one quality nozzle* insures good performance . . . saves you time and worry on those small burners.

Another exclusive — Bi-Metal Construction — only Delavan uses a brass body with stainless steel metering parts. Brass is used because it conducts heat away from the nozzle faster *after burner shutdown.* This helps to reduce the build-up of varnishes inside the nozzle that clog or distort the spray. Stainless steel is used in the orifice and distributor to provide durability in those parts where wear might be a factor.



From the world's largest nozzle manufacturer Delavan is the largest manufacturer devoted exclusively to the design and production of nozzles. Another reason why Delavan nozzles are your best assurance of quality and performance.

Ask your jobber, or write for free literature.

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Calendar of Coming Events

OCTOBER

11–13—Tennessee Oil Men's Association, Annual fall convention, Andrew Jackson Hotel, Nashville, Tenn.

13–16—Fuel Merchants Association of New Jersey, Exhibit and convention, Haddon Hall, Atlantic City.

18–21—Pennsylvania Petroleum Association, management institute, Nittany Lion Inn, State College, Pa.

18–22—Burning Oil Distributors Association, 2nd annual fueloil symposium. The Greenbrier, White Sulphur Springs, W. Va.

21—Westchester OHI meeting, Waldorf-Astoria Hotel, New York City.

26–27—Independent Petroleum Association of America, annual meeting, Statler-Hilton Hotel, Dallas.

NOVEMBER

2– 5—Air-Conditioningg and Refrigeration Industry, 11th Exposition, Atlantic City, N. J.

4– 6—National Oil Jobbers Council, annual meeting, Congress Hotel, Chicago.

9–11—American Petroleum Institute, annual meeting, Conrad Hilton, Palmer House and Congress Hotels, Chicago.

11–13—National Fire Protection Association, fall conference, Hotel Fort Des Moines, Des Moines, Ia.

30–Dec. 2—North American Heating & Airconditioning Wholesalers, Inc., convention, St. Louis.

DECEMBER

3–4—National Warm Air Heating and Air conditioning Association, Chase Park-Plaza Hotel, St. Louis, Mo.

20—Westchester OHI meeting, Waldorf-Astoria Hotel, New York City.

1960

JANUARY

17–21—National Association of Home Builders, Convention - Exposition, Chicago, Ill.

FEBRUARY

1– 4—American Society of Heating Refrigerating and Air-Conditioning Engineers, Southwest Heating & Airconditioning Exposition, Dallas, Tex.

5– 7—Home Improvement Products Show, Navy Pier, Chicago, Ill.

MARCH

7– 9—Jobber Management Workshop, Northwest Petroleum Association, Hotel Nicollet, Minneapolis.

APRIL

4– 7—Oil-Heat Institute of America, National Oil Heat and Airconditioning Exposition, New York Coliseum.

4– 7—Oil-Heat Institute of America, annual convention, Park Sheraton Hotel, New York, N. Y.

Furnaces by Chrysler

Designed—and built—to boost your sales to project home builders

What's it take to sell furnaces to large volume builders? Three things: An edge in price. A nationally known brand with buyer acceptance. A top quality line with no service headaches. Chrysler gives you all three.

The price edge: Chrysler Furnace Dealers can now offer a volume sales plan that lets even the most economy-minded builder install quality furnaces—at budget prices.

The brand recognition: Chrysler Furnaces are nationally accepted and respected. And they're backed by the famous Chrysler reputation for engineering excellence and trouble-free operation.

The quality line: Only Chrysler offers sales features like the super heat-resistant stainless steel combustion chamber with self-locking construction . . . 10-year *full exchange* warranty on heat exchanger. Even the cartons are specially engineered so one man can handle the furnace with ease.

Handsomely styled Chrysler Oil Furnaces are available in capacities from 65,000 to 250,000 BTU output—in types to meet any builder requirements. To see how you can cash in with large volume sales to project builders, contact your local Chrysler Furnace Distributor, today.

BOOTHS 235-239

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in hot water heating or chilled water cooling systems

MAID-O'-MIST

Automatic AUTO-VENTS

CONTINUOUS VENTING ACTION
ENDS CIRCULATION WORRIES!

No. 7 AUTO-VENT®

No wonder Number 7 is a big favorite with both heating and air-conditioning experts! Fully automatic, this brass vent has a self-closing, float operated valve — all mounted on a removable bonnet for quick servicing. Small (4⅜" x 2¼" with ⅛" I.P. female connection) it does a big job of eliminating air. For pressure up to 75 lbs.

Float Type

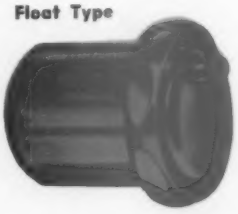
AUTO-VENT No. 67

Is the space limited? Then No. 67 is your Auto-Vent! Its overall size is only 3 3/16" x 1½" with ⅛" I.P. male connection. Takes 30 lb. pressure.

Float Type

No. 72 AUTO-VENT

A fast-venting valve of the expansion type for convectors, baseboard and free-standing radiation. For vertical or horizontal mounting. Size 1¼" x ½" with ⅛" I.P. male connection. Disc dries quickly because of immediate drainage.



Float Type

No. 27 AUTO-VENT

Smaller sized (3" x 2½") for horizontal mounting with ⅛" I.P. female side connection. Use on convectors, radiant coils, etc. Takes up to 50 lb. pressure.

Float Type

No. 37 AUTO-VENT

Similar to No. 27, but designed for horizontal mounting with ⅛" I.P. vertical male bottom connection. Size 3" x 2½". 50 lb. pressure.

Get full information from your jobber or write for catalog, today!

MAID-O'-MIST Inc.

MAID-O'-MIST, Inc.

3217 NORTH PULASKI ROAD · CHICAGO 41, ILL.

Oil Heat Institute sponsors technical Schools in Florida

COURSES for oilheating servicemen sponsored by the Distribution and Manufacturer Divisions, Oil-Heat Institute of America, Inc., New York, are underway in Florida.

Co-sponsoring the courses in Orlando is the Better Home Heat Council of Florida, and in Miami, the co-sponsors are the Florida Power & Light Co. and the Better Home Heat Council.

The curriculum includes: combustion chambers and draft, the application of fueloils to domestic oilburners, oilburner pumps, nozzles and controls. Similar courses were held during August in Reading, Pa., and during September at Coatesville, Pa., with the Pennsylvania Retail Fuel Merchants' Association as co-sponsors.

These courses are available to any OHI chapter at no charge provided the local chapter arranges for a location for the classes and guarantees a minimum of 35 students. At least five weeks advance notice is required by OHI headquarters.

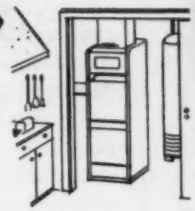
Instructors lecturing at the Florida schools are Robert Gilmartin, Gulf; James R. Holmin, Sundstrand Hydraulics; I. M. Nelson, Boston Machine Works; Darrell Canady and Burt Woodruff, Minneapolis-Honeywell; Robert Hundley, Wm. Steinen Mfg. Co.; and George Deyo and Coy O'Barr, General Controls.

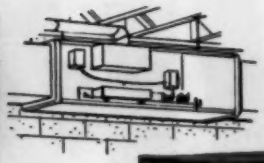
Nelson, Hundley and Holmin were among the teachers at the Pennsylvania schools as were V. L. Evans, Honeywell; Tom Woolf, Webster Electric Co.; and Chris Jensen, Steinen Mfg. Co.

Pennsylvania Association has Convention at Pocono Manor

ROBERT E. CULLEN, managing director, Better Home Heat Council, Boston,

Counterflow Winter Air Conditioners — Heavily Constructed, Compactly Designed — Approved for Close Clearances — Gas Fired and Oil Fired!

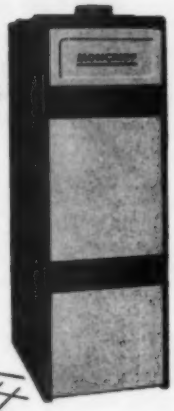




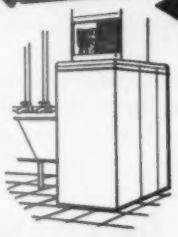
New Horizontal Furnaces — Lower in Height — Increased Air Deliveries — Complete Line of Gas and Oil Fired Models!

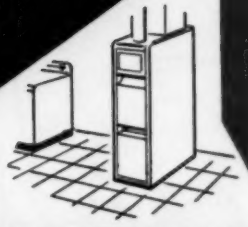
Basement Type Winter Air Conditioners — Attractive Console Cabinets — Designed to Burn either Gas or Oil — Available in Assembled and Wired Oil Models!

Factory Assembled and Wired Upflow Winter Air Conditioners — compact in Design, Substantial in Construction — for Basement, Closet or Utility Room Installation — Approved for Close Clearances — Adaptable for Cooling — Gas and Oil Fired Complete Line!



LOWER INSTALLED COSTS





EVERY TIME with MONCRIEF

Easy, Speedy Installations put Profits in Your Pocket!

When you quote the installed price, it's your *cost in place* that determines your profit.

This is where you gain another big advantage with Moncrief Heating and Air Conditioning Units.

Not only is your purchase price for Moncrief usually less, but Moncrief also saves you important installation money!

For, whether it burns gas, oil or coal . . . is a basement, hiboy, counterflow or horizontal unit . . . is a compact factory-assembled-and-wired package . . . whether it is partially assembled or is unassembled, every Moncrief Furnace is designed to reduce installation time and effort.

Furthermore, when you install Moncrief you secure customer satisfaction, backed by more than 60 years of manufacturing experience and service-free operation in hundreds of thousands of installations.

If you want the lower *in place* costs that make increased profits, call your Moncrief Wholesaler, *now!*

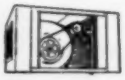
Underwriters' Listed Air Cooled Condensing Units — 2, 3 or 5 H.P. Capacities

Winter Air Conditioner — Upflow Type, with Plenum Evaporator Coil

Winter Air Conditioner — Basement Type, with Plenum Evaporator Coil

Winter Air Conditioner — Counterflow Type, with Counterflow Evaporator Coil

Horizontal Furnace — with Duct Type Evaporator Coil



Blower-Coil Unit — Compact Air Handling Combination

Gas Unit Heater — 5 Models

Conversion Gas Burner

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THE HENRY FURNACE COMPANY • *Medina, Ohio*

HEATING AND AIR CONDITIONING UNITS — MONCRIEF SINCE 1895 — FURNACE PIPE AND FITTINGS

fuel oil & oil heat

WHY settle for an ordinary voltage tester?

Ask yourself these questions	The AMPROBE Junior	ordinary voltage tester
Does it measure current as well as voltage?	YES	NO
Does it give you full visibility on a graduated reading scale?	YES	NO
Does it fit conveniently in your pocket?	YES	YES
Does it measure within ±3% accuracy?	YES	NO
Does it come in a full line of models to meet different problems?	YES	NO
Does it protect you against shorts and shocks?	YES	YES
Does it balance loads, locate grounds, determine motor overloads, check rating of circuit breakers?	YES	NO

The AMPROBE Jr. gives you so much more... not just a run-of-the-mill voltage tester but a precision-made instrument that measures voltage *and* current instantly and accurately without shutting down equipment. All this with one rugged and inexpensive pocket-size tool! And now...FOR THE FIRST TIME...at the request of utilities, industrial plants and other large-scale users of AMPROBES, the AMPROBE Jr. has gone SAFETY YELLOW to conform with standard safety practices.

PICK THE AMPROBE YOU NEED! There's an Amprobe for every job, every budget: from 10 amps and 250 volts to 1200 amps and 600 volts AC; from $19.85 to $67.50. And with the Amprobe RS-3, you get a volt-amp-*ohmmeter* all in one pocket-sized, snap-around precision instrument. Every Amprobe comes with test leads; most with top grain cowhide leather case at no extra cost. See the complete Amprobe line at your jobber's today.

Amprobe Jr.®
snap-around volt-amp tester
$19.85

PYRAMID INSTRUMENT CORP., Lynbrook, New York

was among the speakers at the Fall Convention of the Pennsylvania Petroleum Association, Inc., held at Pocono Manor Inn, Pocono Manor, Pa., September 20-22.

His topic was "A practical Approach to meeting the Challenge of competitive Fuels." Other speakers were Miles Mills, president, National Oil Jobbers Council; Harold T. Brocksbank, Mobil Oil Co., Leo J. Hoard, Sinclair Refining Co. and Dayton P. Clark, Associated Petroleum Industries of Pa.

Old Timers' Group has Party at New Jersey Country Club

MEMBERS of the Old Timers' Club, Inc., from New Jersey, New York and Pennsylvania attended a Gol-Fun party at the Plainfield Country Club, Plainfield, N. J., September 29.

Serving on the arrangement committee were Chris Jensen, James W. McGuire, Curtis H. Soderberg and Edmund J. Grady.

New Jersey Fuel Merchants plan Convention, Oct. 14

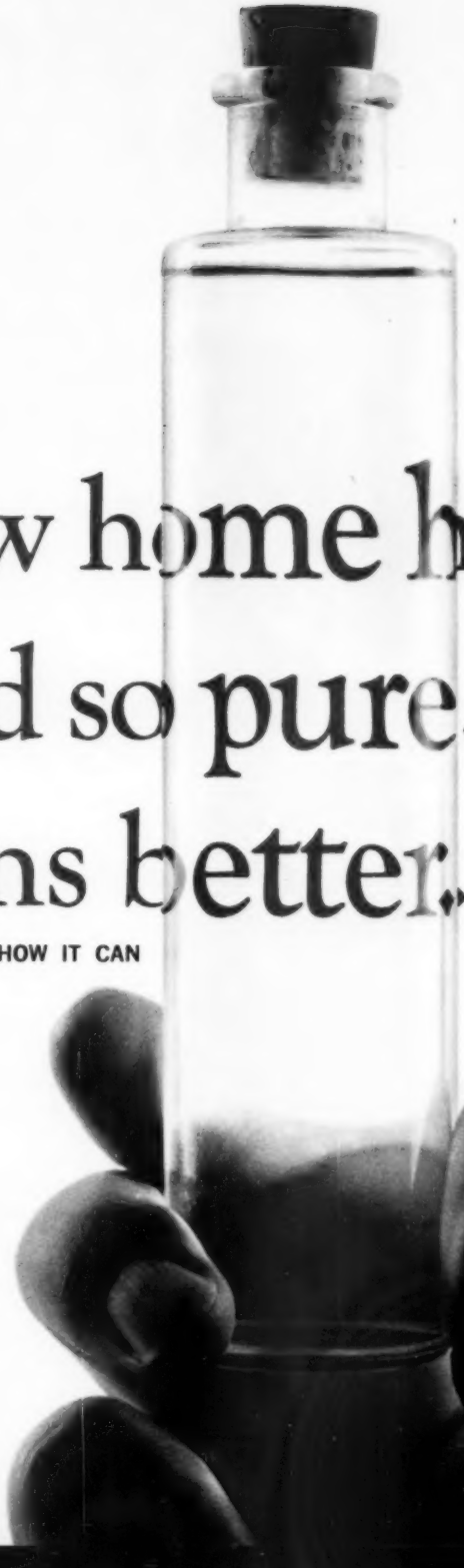
ATLANTIC CITY, N. J., will be the scene of the 27th annual convention of the Fuel Merchants Association of New Jersey, October 14-16. Dozens of exhibits will be set up at Hotel Haddon Hall.

This will be the first combined meeting of oil and solid fuel dealers. To insure a good attendance, six teams under the chairmanship of Jack Shurtleff have been hard at work for two months. The team captains are Morris Marshall, Frank L. Demmert, Melvin J. Nichols, William T. Hodum, Herman F. Schmoldt, and George Gingerich.

Home improvement Exposition to show Products in Chicago

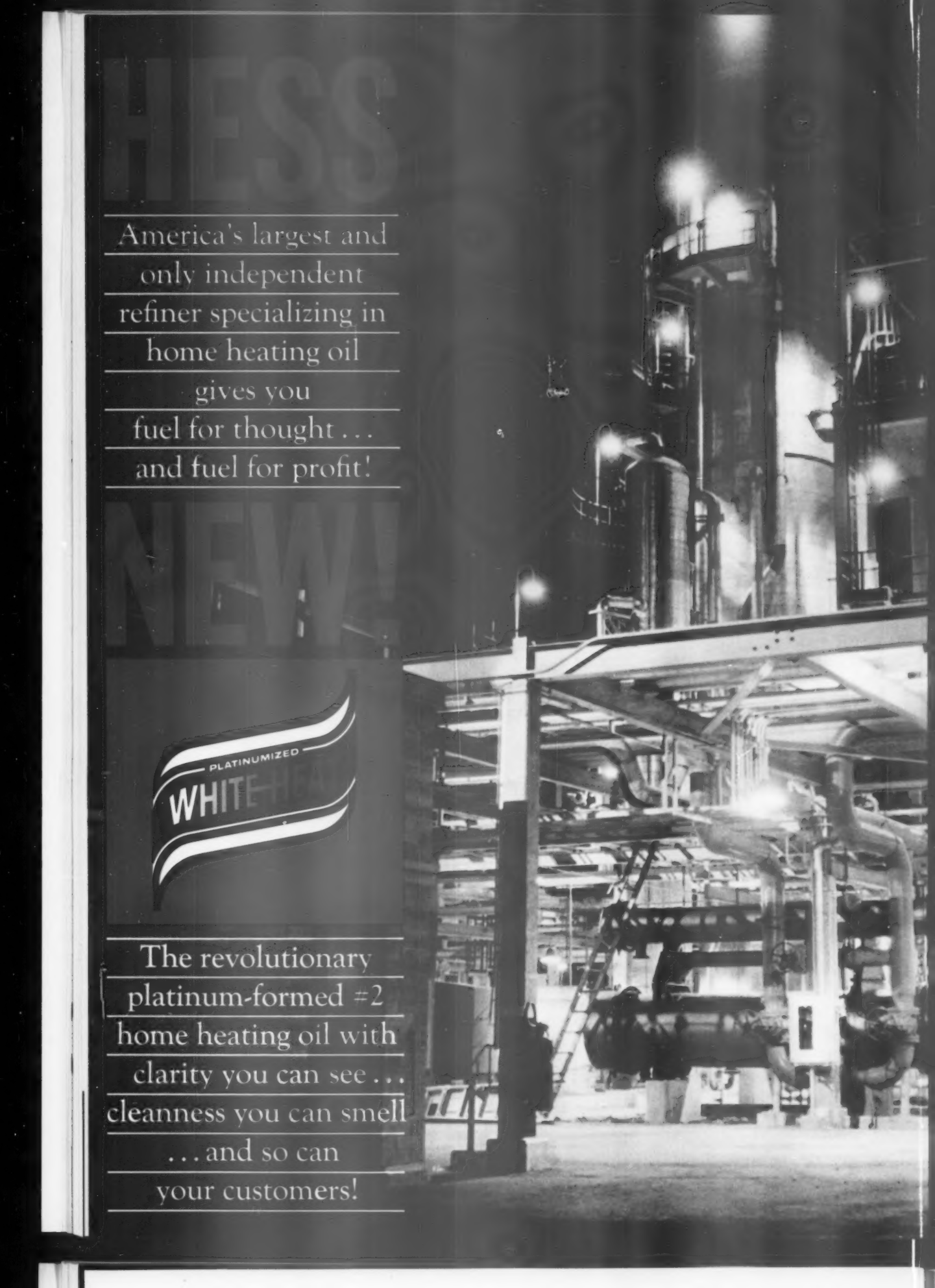
THE 1960 Home Improvement Products Show will be held on February 3 through 7 at the Navy Pier in Chicago.

Plans for attending dealers include some 12 workshop seminar and panel sessions covering sales, service, management and business expansion programs.



a new home heating oil refined so pure...so clear it burns better...cleaner

TURN THE PAGE AND SEE HOW IT CAN BUILD YOUR FUEL OIL BUSINESS...


HESS
America's largest and only independent refiner specializing in home heating oil gives you fuel for thought . . . and fuel for profit!
NEW
PLATINUMIZED
WHITE
The revolutionary platinum-formed #2 home heating oil with clarity you can see . . . cleanness you can smell . . . and so can your customers!

Your customers can SEE THE DIFFERENCE! WHITE-HEAT is high-quality, straight-run #2 fuel oil... with nothing added... *nothing added at all!* It is pure, platinum-white in color. So clean, so clear your prospects can actually *see* the difference between WHITE-HEAT and ordinary fuel oil... can actually *read* your heating oil contract through a vial of WHITE-HEAT. And because WHITE-HEAT is straight-run fuel oil—with 2% less carbon than any other home heating oil—it burns better, burns cleaner!

Your customers can SMELL THE DIFFERENCE! Let your customers smell WHITE-HEAT—and then smell ordinary heating oil. One sniff will tell them that WHITE-HEAT is more highly refined. It's Platinumized-pure with the lowest sulphur content of any #2 fuel oil. That's why you can honestly assure them that there will be no heavy, unpleasant, clinging odor... the kind of odor that usually lingers on long after each home delivery!

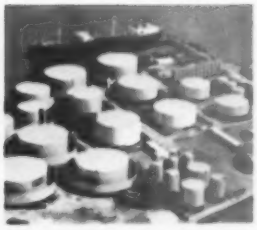
EXTRA DIFFERENCES THAT SELL WHITE-HEAT FOR YOU! This is important—and unique! WHITE-HEAT is refined so pure that it requires no additives! You can promise your prospects less soot... less sludge formation... less clogging of oil lines, filters and nozzles. And WHITE-HEAT will keep your word! Furnace parts stay cleaner—work better—last longer! And because your customers require fewer service calls, WHITE-HEAT means a more profitable service operation for you!

ONLY HESS GIVES YOU PLATINUMIZED WHITE HEAT

ONLY HESS GIVES YOU THIS SECURITY OF SUPPLY

you can always depend on HESS

HOME HEATING OIL — WHEN YOU NEED IT... WHERE YOU NEED IT!



BILLION GALLON STORAGE

. . . your guarantee of unlimited fuel oil supply! At 15 strategically located Hess terminals a total of one billion gallons is always on tap. To service the New York-New Jersey area alone, Hess maintains storage facilities of over 250,000,000 gallons! Hess-owned, ocean-going tankers carry crude oil directly to the Hess refinery where it is processed into Platinumized WHITE-HEAT and kept on hand—ready to fill your needs!

ROUND-THE-CLOCK DELIVERY

. . . that always arrives on schedule—whether your order is regular or emergency. The Hess fleet of 150 trailer-trucks stands ready to move on a moment's notice—ready to fill your heating oil needs—any hour of the day and night . . . seven days a week!

METERED TRUCKS

. . . so you know *exactly* how much heating oil is delivered into your storage tanks. Every WHITE-HEAT trailer of the huge Hess transport fleet is equipped with a meter that is regularly checked for accuracy. It prints its own delivery ticket. No guesswork. No need to check Hess trailers before and after delivery. You get every drop you pay for.

QUALITY CONTROL

. . . that insures satisfied customers for you. Platinumized WHITE-HEAT is tested *hourly* in the refinery laboratory . . . periodically in Hess storage tanks for pour point, low sulphur, carbon, residue and anti-sludging content. That's why you can count on the quality of WHITE-HEAT . . . always!

PLATINUMIZED WHITE-HEAT

HESS THE BRAND TO BUILD YOUR NAME ON

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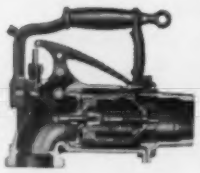
No. 1190

For dispensing aircraft lub oil. Has "non-drip" spout. Meets MIL-N-7284-B and MIL-N-7364-A. Sizes: 1½" and 2".



No. 620

High pressure type for bulk plants, aircraft, and Diesel fueling. Sizes: 2", 2½", 3".

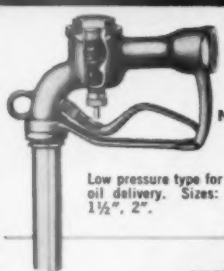
FULL FLOW • EASY SHUT-OFF • NO SHOCK • NO PRODUCT SURGE

No. 210

High pressure type for home fueloil delivery. Sizes: 1¼" and 1½".

OPW BULK LIQUIDS NOZZLES

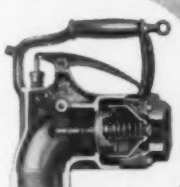
for blending • filling • transfer



No. 190

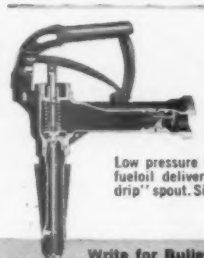
Low pressure type for home fuel-oil delivery. Sizes: 1", 1¼", 1½", 2".

MINIMUM PRESSURE DROP • PERFECT BALANCE • LOW MAINTENANCE



No. 220

Gravity, low pressure type for bulk plants. Sizes: 2", 2½", 3".



No. 516

Low pressure type for home fueloil delivery. Has "non-drip" spout. Sizes: 1½", 2".

Write for Bulletin F-9

OPW CORPORATION

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Kirby 1-5400

Oregon Oil Heat Institute has fall Meeting at Delake

THE ANNUAL fall meeting of the Oil Heat Institute of Oregon and Southwestern Washington will be held at Surftides, Delake, Ore., October 9-11.

The association has its television promotion underway. Every major station of the state has been carrying the oilheating message.

A limerick contest, the Oil Heat-O-Rama, has been very successful. Contestants filled out questions about their heating plants; thus building a good list of leads.

Maine dealer Association appoints more Committees

KENNETH R. GIFFORD, president, Maine Oil & Heating Equipment Dealers' Association, has made the following committee appointments:

Membership — H. Allen Mapes, chairman, Erlon Ridlon, Waldo White, George Litchfield, and Norman Kalloch.

Liaison—Charles L. Hamm, chairman, David W. Fuller, Jacob S. Holmes, and L. B. Cook.

Convention—L. B. Cook, George H. Musk, Willard Wight, J. Bart Conners, Raymond Adams, John Cullinan, Richard A. Morrell, C. K. Clauson, and Donald Nelson.

Marketing — E. Thomas Hacker, chairman, George Andrews, Gard V. Twaddle, Jr., Harland Bruns, Wendell B. Tripp, Vincent C. Peters and Henry Littlefield.

At a recent meeting of the Chicago Better Heating-Cooling Council, Joseph P. Baldwin, right, was honored as founder and first president of the group. Newly-elected president, George W. Bornquist, presents him with a special plaque to mark the occasion.

CLEANING POWER with the Portable NO. 521-8

take your SOOTMASTER in one hand hose and all

The Portable SOOTMASTER #521-8 weighing only 21 lbs. is the vacuum which offers the maximum filter area and largest soot chamber of any industrial cleaning unit of its size.

MASTERCRAFT'S exclusive hose-holder basket let's you carry the entire cleaner including the hose from job to job with only one hand. Users do more work with less effort.

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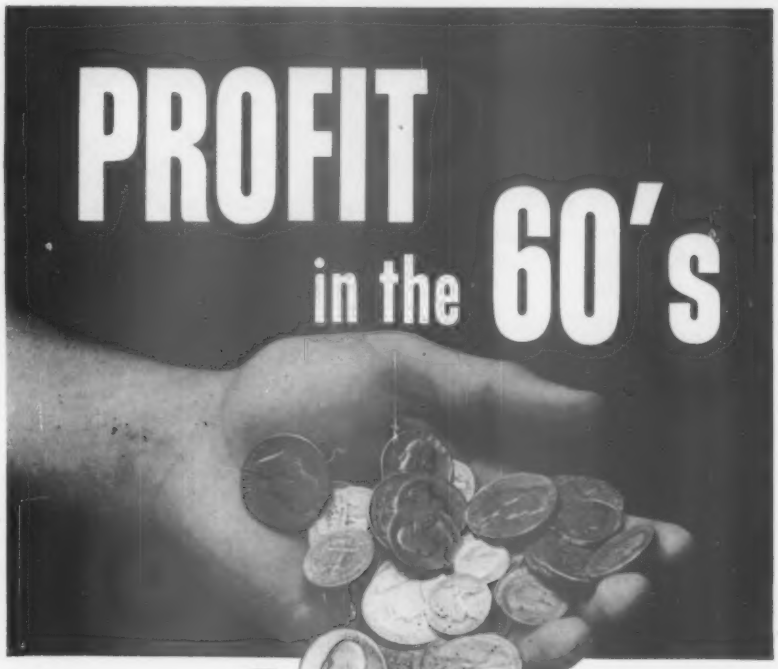

with YORK-HEAT

Proved Products — York-Heat oil-fired boilers and furnaces have for more than 40 years been regarded as the highest quality products for automatic heating.

New Products — Now York-Heat engineers have developed new *gas-fired boilers and furnaces skillfully designed* for market needs, priced competitively, and styled for the 60's.

Old Friends — York-Heat equipment has for years been used by the nation's largest builders. These men buy quality products—products that will deliver years of trouble free operation for the buyers of their homes.

New Friends — York-Heat's distributing organization is growing rapidly, but good protected territories remain available for distributors and dealers who are interested in profitable business in the 60's.

Write today for details.

YORK HEAT

YORK-SHIPLEY, inc.

Pioneer and Specialists in Automatic Heat

Boilers to 600 Hp.
Furnaces to 5 Million B.t.u.h.

YORK, PENNSYLVANIA

Toronto oilheating Group has Booth at Exposition

THE TORONTO CHAPTER, Oil Heating Association, began its fall drive to increase fueloil's share of the heating market with an educational booth at the General Exhibits Building at the Canadian National Exposition.

Miss Bonnie Oil Heat (Honey Venis) was in attendance to give out Scottie hats to the children and to select the winners of the free furnaces given at the close of the Show.

Directors of the chapter are Ed Canning, president; J. D. MacKenzie, secretary-treasurer; Fred W. Birch, Hugh G. MacKenzie, John Milnes, D. R. Taylor, Murray J. Bowes, R. B. Dickinson, A. P. Hickox, Ian McIntosh, and J. Sweeney.

Miss Bonnie Oil Heat (Honey Venis) reigned over the Oil Heat Exhibit at the Exposition. She is employed by the Sunnibilt Fuels Ltd. and is receiving a diamond wrist watch from Elwood Glover, Toronto radio personality. Featured in the booth was a replica of Yellowstone's Old Faithful which gushed forth hot water (furnished by an oilfired water heater) every 30 seconds.

ZONVALVE*

the zone control valve with

100% SHUT OFF

for positive temperature control!

Globe-type construction of Zonvalve guarantees complete shut-off on steam, hot and chilled water systems. This means positive temperature control, without heat waste.

Engineer-architects and heating men recognize the superiority of Zonvalve's design features. Self-aligning plug insures positive closure and eliminates jamming. Valve is powered by a heavy-duty motor, with pinion, gear and cam assembly—for extra-long life and silent, dependable operation. Zonvalve's "hand-size" compactness makes installation possible where space is limited. Zonvalve is the *only* valve that uses Teflon for a self-lubricating, permanent seal.

Zonvalve is competitively priced. Built to last a lifetime, *it is the only zone control valve with an unconditional written Five-Year Guarantee!*

Zonvalve is ideal for modernization and new construction, in residential, commercial and industrial zone heating. For the finest in zone control equipment—specify Zonvalve, install Zonvalve!

New color brochure contains layouts, applications, customer benefits, technical data and prices. Write for Brochure B-10.

ZONVALVE

* This Trade-Mark is registered by Heat-Timer Corp., manufacturers of heating controls and motorized valves since 1935. It is your guarantee of positive zone control.

ZONVALVE MODELS

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AVAILABLE IN SIZES FROM [illegible] TO 1¼"

HEAT-TIMER CORP.
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EVER-TITE
Standard Adapter
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Your best buy is

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QUICK COUPLINGS

You save *time* and *money* when you use Ever-Tite Couplings because they speed-up deliveries, prevent leakage, and save wear on equipment.

Tightness is predetermined in manufacture by positive gasket compression. There are no sliding rings—no springs, ball bearings, snaps or lugs to fit. You just slip the coupler over the adapter, and close the handles.

EVER-TITE
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Coupler

If you want to get the *most* in coupling value get *Ever-Tite*. The Ever-Tite Trademark is a hallmark of dependability in fittings for the petroleum industry—proved by 18 years of pre-eminence. Ask your distributor now.

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EVER-TITE COUPLING CO. INC.
254 West 54th Street
New York 19, N. Y.

Dust Plug

Dust Cap

Every EVER-TITE saves time and money

EVER-TITE Dust Protectors

Fall management Clinic planned by IOMA, Oct. 8

FUELOIL distribution problems will be discussed and solved at the Fall Management Clinic sponsored by the Independent Oil Men's Association at the Sheraton Plaza, Boston.

Scheduled to appear on the program are: Thomas Mahon, credit management consultant with F. Raymond Kraemer, Mineola, N. Y., who will show what accounts receivable should be for each month and how to manage them so that they will remain as low as possible. Marion Hogan, president, Weather Services, Inc., Boston, will explain how to make degree-day systems more accurate based on effects of sun and wind on fuel-oil consumption.

Robert Patten, Robert A. Patten & Co., will suggest how to simplify yet maintain complete accounting records. Charles Eyster, president, Goodling Electric Co., York, Pa., will describe his own public relations program. He will also tell how to achieve maximum fueloil deliveries.

Gold Seal Fuel Associates celebrate oil Centennial

THE ANNUAL BANQUET of the Gold Seal Fuel Associates, Inc., in Jersey City, N. J., September 17, served to celebrate the Oil Centennial.

Special guests at the affair were the municipal fire chiefs of Hudson County. John Eggers was chairman of the entertainment committee.

National Fueloil Council prepares heating Hints

A RELEASE on the care of heating plants has been prepared by the National Fueloil Council, Inc., 424 Madison Ave., New York 17. This article points out the many good features of oilheating along with helpful information.

It has been prepared so that local associations can be credited with the material along with the Council.

This story has been circulated to many newspapers and magazines, but it can be extremely useful at the local level. Anyone wishing copies should write the National Fueloil Council.

1st

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PHILLY
RAPID-TITE
Fuel Oil Delivery System

. . . you can reduce delivery costs as much as 20%. We'll prove it to you with your equipment at your office. Ask our field service man or send coupon below.

PHILLY'S first for modern fuel oil delivery

- One Nozzle Connector fits all fills.
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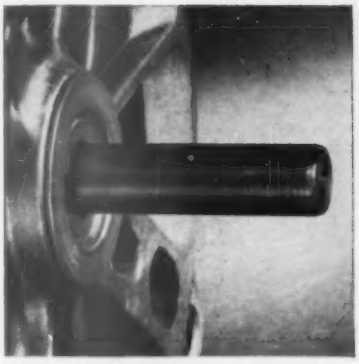
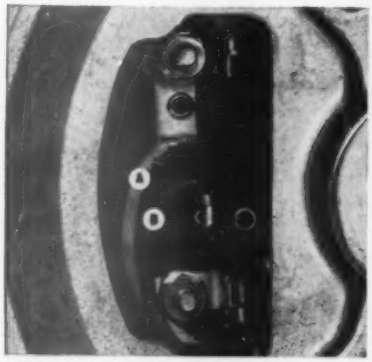
HOW GENERAL ELECTRIC OIL BURNER MOTORS SAVE YOU MONEY:

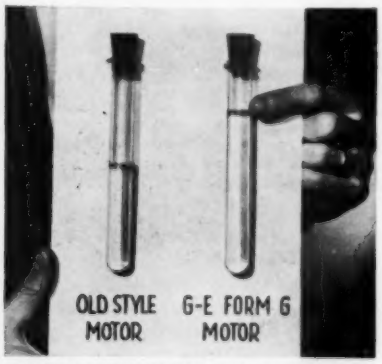


SHAFT PROTECTION—new gun-metal-like treatment of shaft resists rust so that the blower is always easy to remove.

"AIR-WALL" DESIGN transmits heat swiftly yet stops entry of dirt. Trip-outs are rare even in hot, cramped quarters.



FAST ROTATION CHANGE (simply reverse plug-in lead connectors "A" and "B" to change rotation) minimizes service stocks needed.



4-YEAR LUBRICATION practically eliminates reoiling nuisance. 50% more oil, effective retention system mean long life.

General Electric's oil burner motor offers you these outstanding advantages:

CUTS NUISANCE SERVICE CALLS. Exclusive "air-wall" design transmits heat swiftly, greatly reducing trip-outs which require time-consuming service calls. An invisible "air-wall" stops entry of dirt. Motor meets all Underwriters' Laboratory requirements for totally enclosed designs. Four-year normal lubrication life also helps to eliminate many nuisance calls for routine reoiling.

CUT INVENTORY IN HALF. Interchangeable rotation of G-E oil burner motors greatly reduces the service stocks you require.

CUT INSTALLATION COSTS. The G-E oil burner motor is over 50% lighter than older designs, permits easier handling and installation even in tight places.

LASTS LONGER. General Electric's famous wear-resistant switch, long-life lubrication, plus moisture resistant insulation system mean long, dependable life, fewer call-backs, more satisfied customers.

All these money-saving features are yours when you specify "G-E motors" on the oil burners you buy. They're also ideal for replacement purposes. For more information, write Section 702-96, General Electric Company, Schenectady 5, N. Y.

Progress Is Our Most Important Product

GENERAL ELECTRIC

fuel oil & oil heat

ONLY THE
VENTALARM®
Whistling Tank Fill Signal, the signal that revolutionized fuel oil delivery, gives you all of this...

CONFIDENCE — proved by literally millions of VENTALARM Signal installations.

PROTECTED RESONANCE CHAMBER — keeps bugs, scale and foreign matter out of the whistle. Eliminates expensive repeated maintenance. NFPA Standards of May, 1957, state "Vent Caps shall not employ screens."

EASY INSTALLATION — for new or old burner installations. Model LC for old tanks, Models LA and L for new tanks.

LOW COST — pays for itself in the first five deliveries.

Literature and prices are available. Write now to:

SCULLY SIGNAL COMPANY

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The term "VENTALARM" is a registered trademark and is applicable solely to liquid level indicators, manufactured by the Scully Signal Company.

Men associated with the warm air industry recently completed a Silver Shield Training Program in Niagara Falls. Seated from left to right are Raymond Marsh, Paul Argy, Donald Argy, Theodore Biachinski, Frank Crowley, Robert Miller, Lewis Marchetti, William Metzger, Angelo Mazzei, Joseph Godzisz, Bertrum Gardner and Albert Hibbard.

Standing (left to right) are Roy E. Ensminger, William L. Boyle, Ronald Hartsock, Leonard E. Riegle, Robert Price, Joseph Craig, Ralph Hillis, Curtis Valentine and Neal Gray.

Silver Shield Programs are started by Warm Air Groups

FOUR ADDITIONAL Silver Shield programs are being organized by heating dealers in Philadelphia, Camden, Niagara Falls and Mansfield, O., under the sponsorship of the National Warm Air Heating and Air Conditioning Association, Cleveland.

These programs are a part of the nationwide campaign to upgrade and improve heating and cooling systems. In each case the local dealers form an organization for the mutual policing and promotion of ducted warm air systems. These organizations are called Indoor Comfort Bureaus.

Serving as presidents of the newest groups are A. E. Dansereau, Delaware Valley, Inc., (Philadelphia), Raymond Marsh, Niagara Falls, Edward J. Betz, Richland County (Mansfield, O.) and John White, Camden, N. J.

One hundred years of history in woman's fashions were shown recently at the residence of New York City's Mayor, Gracie Mansion. The show marked the Centennial of the Oil industry and was sponsored by the New York State Petroleum Council's eastern region committee.

Shown on the lawn are Tom Donelon, Cities Service, as Colonel Edwin L. Drake; seated left to right: Kathleen Love and Barbara Keyes of Sinclair, and Rosanne McLernon, New York Oil Heating Association.

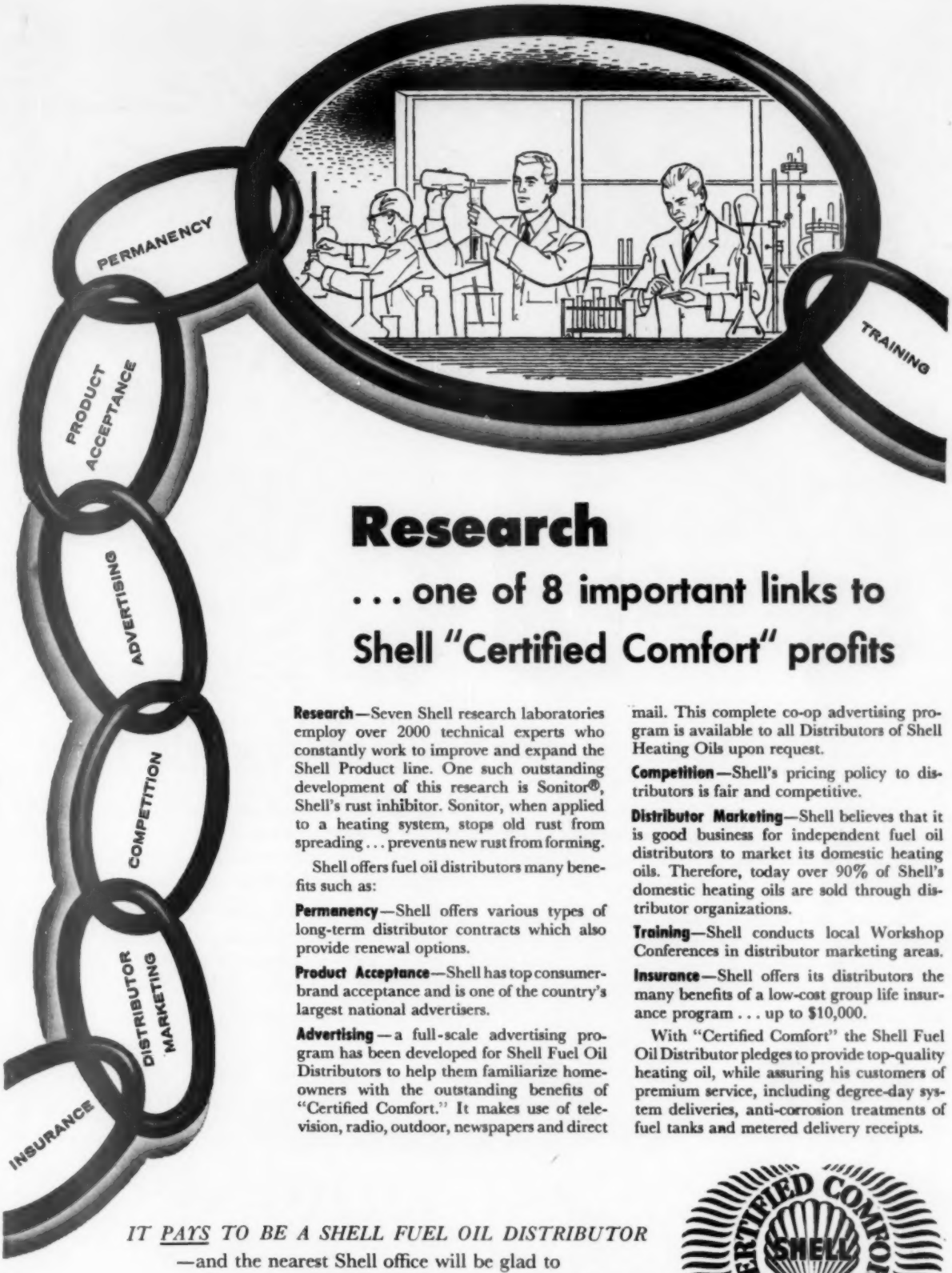
A parade of horse and buggies and vintage automobiles was held on Fifth Avenue, September 10.

OHI circulates Glossary of common heating Terms

A BRIEF GLOSSARY of heating terms has been compiled and circulated by the Oil-Heat Institute of America, Inc., New York.

It has been mailed with a covering letter to the editors of newspapers and magazines to aid reporters writing stories about heating plants, particularly stories about fires and explosions.

(*Please turn to page* 130)



Research

. . . one of 8 important links to Shell "Certified Comfort" profits

Research—Seven Shell research laboratories employ over 2000 technical experts who constantly work to improve and expand the Shell Product line. One such outstanding development of this research is Sonitor®, Shell's rust inhibitor. Sonitor, when applied to a heating system, stops old rust from spreading . . . prevents new rust from forming.

Shell offers fuel oil distributors many benefits such as:

Permanency—Shell offers various types of long-term distributor contracts which also provide renewal options.

Product Acceptance—Shell has top consumer-brand acceptance and is one of the country's largest national advertisers.

Advertising—a full-scale advertising program has been developed for Shell Fuel Oil Distributors to help them familiarize homeowners with the outstanding benefits of "Certified Comfort." It makes use of television, radio, outdoor, newspapers and direct mail. This complete co-op advertising program is available to all Distributors of Shell Heating Oils upon request.

Competition—Shell's pricing policy to distributors is fair and competitive.

Distributor Marketing—Shell believes that it is good business for independent fuel oil distributors to market its domestic heating oils. Therefore, today over 90% of Shell's domestic heating oils are sold through distributor organizations.

Training—Shell conducts local Workshop Conferences in distributor marketing areas.

Insurance—Shell offers its distributors the many benefits of a low-cost group life insurance program . . . up to $10,000.

With "Certified Comfort" the Shell Fuel Oil Distributor pledges to provide top-quality heating oil, while assuring his customers of premium service, including degree-day system deliveries, anti-corrosion treatments of fuel tanks and metered delivery receipts.

IT PAYS TO BE A SHELL FUEL OIL DISTRIBUTOR
—and the nearest Shell office will be glad to show you why. Ask for the District Manager.

CERTIFIED COMFORT
SHELL
HEATING OILS

Fuel Oil & Oil Heat

What makes Luxaire® easier to sell than to compete against?

SEE OUR EXHIBIT

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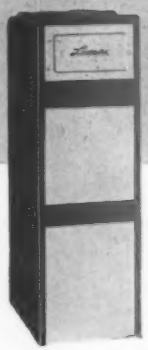

UPFLOW: Compact Gas Fired and Oil Fired Winter Air Conditioning Units are completely Asssembled and Wired, Heavily Constructed and Smartly Styled. Equally adaptable for the basement, the utility room or alcove.

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HORIZONTAL: Gas Fired and Oil Fired Furnaces are low and compact for the "tight" spaces — a complete line of Gas or Oil.

BASEMENT: Gas Fired and Oil Fired Units. Burn either Gas or Oil with equal efficiency. Handsome Console Cabinet. Assembled and Wired Oil Units.

With Luxaire—You need not choose between Excellence and a Low Price!

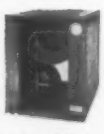
Luxaire gives you the excellence of heavy construction and uncomplicated design in every unit of the complete Luxaire line — with every unit consistently competitive in price!

Whatever you need — Winter Air Conditioning Furnace, Summer Air Conditioning Unit, Gas Unit Heater or Conversion Burner — you can always count on the Luxaire Unit to have deluxe qualities, always at a competitive price!

These twin advantages permit you to command increased profits from replacement or custom-installed jobs — and to compete successfully against cheaply constructed units in price bidding!

And, you are not burdened by a heavy inventory in order to enjoy the favorable price. A nearby Luxaire jobber stands ready to provide speedy delivery on the Luxaire Unit of your choice!

See your Luxaire jobber, *today!*



2, 3 or 5 H.P. Air Cooled Condenser-Compressor Unit. Underwriters' Listed for Outdoor Installation.

Upflow Winter Air Conditioning Unit with Circular (Plenum Type) Cooling Coil.

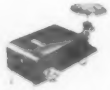
Basement Type Winter Air Conditioning Unit with Circular (Plenum Type) Cooling Coil.

Counterflow Unit with Counterflow Cooling Coil in Accessory Cabinet.

Horizontal Furnace with Duct Type Cooling Coil.

Air Handling Blower and Cooling Coil Unit.

Gas Fired Unit Heater. 5 Sizes.



Gas Conversion Burner.

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Oil and Water can mix

Massena Oil Terminal successfully operates Marina on St. Lawrence Seaway

by William J. Stein

Many have been the suggestions to insure profitable operation for fueloil distributors during the non-heating months. Here's still another—perhaps somewhat limited in its application—but one which many companies can consider. It means operating a marina, which somehow seems quite logical for the average fueloil distributor, who basically is service-minded. Any heating oil man whose company is near a boating area might well look into marina possibilities.

THE FELLOW who said that oil and water do not mix might come up to Massena, N. Y., to take another look. All of us have seen how water provides the roads on which tankers have carried oil for years. This, of course, is the basic business of the Massena Oil Terminal. Interestingly enough, Mort Copeland, the president of this company, added another mixture; he took advantage of the shore line to provide for the recreational activities of boating and water sports by building a marina.

It all came about because of a sudden emergency. In 1953 the Massena Oil Terminal was constructed at Richards Point on the shore line of the St. Lawrence River. Growth continued at a normal pace. All eyes, however, were focused on the St. Lawrence Seaway Route. This terminal was anxiously awaiting the day when ocean going tankers would pull up to its dock. Finally, the day came into sight; but the Massena Oil Terminal found itself in the middle of the proposed bay. Because of engineering problems the plans for the waterway route were changed. These changed plans required the complete flooding of the area where the plant was located at Richards Point.

A move was in order. After working out the details with the Power Authority of the State of New York a new site was selected two and one-half miles down the river. The moving started in the Spring of 1958 and had to be completed by July, a matter of several months, in order to comply with the date for the flooding of this area. The dismantling operation had to be carried on simultaneously with the construction of the new plant. Moreover, the new plant had to be in a position to operate throughout the spring and summer and provide enough storage to carry the firm's growing responsibilities through the coming winter.

To assure a continuous flow of product from the new plant during the construction period, a temporary

Picture taken from the dock of the Massena Oil Terminal. Pipeline in the foreground conveys oil to the tank field.

Mort Copeland, president, Massena Oil Terminal, Massena, N. Y.

Bill Massey, plant superintendent, Massena Oil Terminal.

pipeline was laid from Richards Point to the new location. This enabled the terminal to move the oil from the old tanks to the new storage space without tying up its equipment. It also enabled the terminal to supply the tanks at the new terminal from the old dock prior to the flooding.

Working on the new terminal was simplified by the absence of water during the construction period. In other words, the entire new terminal, including the docking facilities, was built on dry land.

While the construction on the new terminal was under way a new idea was introduced. Why not build docking facilities for pleasure craft? Water front facilities were more than adequate for handling the unloading of any ocean-going vessel on the east end of the terminal's property. The west end of the water front was just a natural for the marina. It should also be remembered that after the decision to do this work was made the construction was simplified because all the "under water" work could be done on dry land and during the period prior to the flooding of the area.

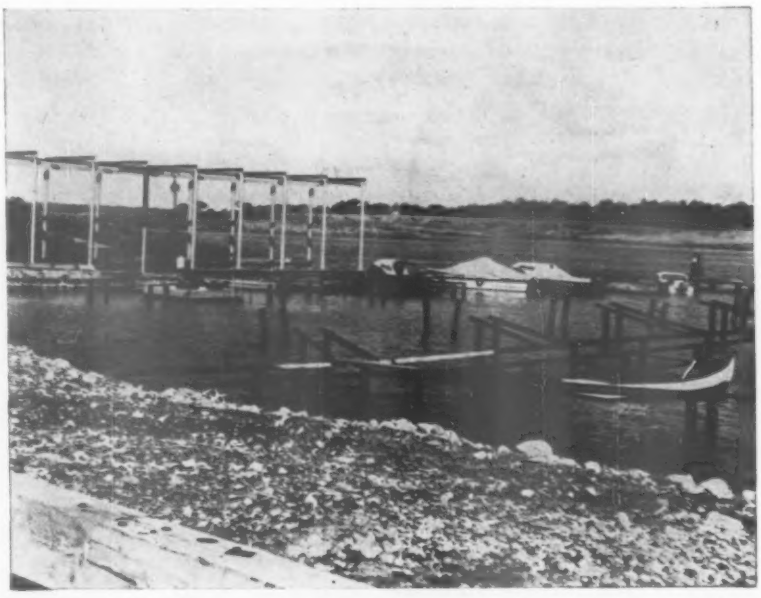
The thought of building the marina came about in several ways. The company has its own 42 foot Diesel tug boat which is used to help with the docking of larger vessels. This boat had to be taken out of the water for the winter in order to prevent its being cracked up by the ice. A marine railway had to be built for this purpose. Well, why not further capitalize on this project and extend this service to other boats of similar size?

With the coming of the Seaway the talk among local residents of the expansion of water front recreational activities in this area was a common topic. This optimism was shared by many newspapers which had been featuring articles on the attractions of the Seaway to the small boat owners in the entire northeastern part of the country. Also, incorporated in the plans for the Seaway were public parks and beaches to accommodate tourists and local residents.

Most important Reason

According to Copeland his most important reason, from a business point of view, was the fact that this marina would supply a means of providing employment for his help during the summer months when very little product is being delivered. This was based on the premise that his normal crew was both willing and able to work at the marina during the summer months.

At this point Mort Copeland prescribed some precautionary measures that he set as a guide for himself. One has to have the personnel who know their business at the water front.



A view of the marina, taken from the automobile parking lot. The unfinished dock will be ready for boats after planking has been laid along the walks.

Usually terminal operators have a few such people. In this instance Bill Massey, the superintendent of the Massena Oil Terminal was just such a man. Years of experience with both large and small boats made him very helpful at the terminal and at the marina.

Mort Copeland indicated that the operation of the marina, in his mind, must always be considered as completely subordinate to the oil business. In other words, its purpose was to supplement the oil terminal; hence, its operation should in no way interfere with the handling or movement of oil. Mort Copeland emphasized that this should apply not only to the physical aspect, but also to the business, management and financial phases of the business.

To accomplish this purpose the Massena Oil Terminal, Inc. established the marina as a separate corporation. It was felt that this was necessary because it was basically a different activity. Then again, insurance and liability problems were better defined if the two operated as independent entities.

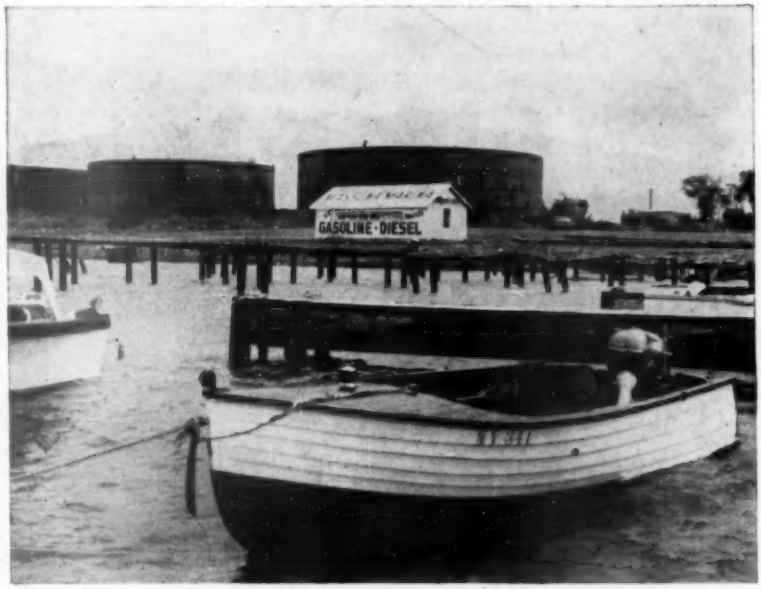
In this case, the marina rents its space from the Massena Oil Terminal, Inc. The terminal employees perform all the work on the marina and are paid by the terminal company. The Massena Oil Terminal, Inc. then bills the marina for this service. Thus, the original oil terminal workers remain with this company. This process simplifies the accounting for both companies, as well as the employees.

Does It pay?

Does the operation pay? This can only be answered in the future. It was estimated that between $20 and $25 thousand went into the property and construction. Steel slips were built to accommodate 50 boats ranging from the smallest outboard to cruisers of more than 50 feet in length. A marine railway to haul boats out of the water as well as a boat lift with a capacity of up to 15 tons were built alongside of the slips. Fresh drinking water was obtained from wells and piped out to supply boats at dock side. Fuel for both gasoline and Diesel engines had to be stored on shore, piped and pumped to stations and made ready to be furnished to boats. Several small buildings were erected for storage and show rooms. The adjoining area was leveled for automobile parking and winter storage of boats.

As Mort Copeland said, "There is more to this than meets the eye at first glance." Rates for storage range from $125 a season for small boats to more than $300 a season for boats over 42 feet long. This includes launching, hauling out, and storage. Additional charges are made for work other than the basic services. Labor costs for boat servicing are priced at $4 an hour for the customer. Copeland's plans also include a sales agency for boats, motors and equipment. At this point he has arranged for a dealership with the Evenrude outboard motor company, the Lyman boat company and the Duratech company. Lyman manufactures wooden boats and the Duratech company manufactures plastic and aluminum boats.

The marina has its place. However, Copeland again cautioned that it is only like a small tail of a large dog—to be wagged at the convenience of the dog. His main business is storing and shipping fueloil. As such, the marina, boats and recreational facilities are there only as an aid to the operation of the major interest—oil.



A view from one of the platforms of the marina. The slips in the foreground already have been completed and are in use. Pilings just beyond are ready for planking. Massena Oil Terminal storage tanks are visible in the background.

❖

July building Contracts set Record for Month

JULY CONTRACTS for future construction in the United States rose to a new all-time high for the month according to F. W. Dodge Corp., New York. Housing sparked the increase with contracts for residential building totalling nearly $1.7 billion, an increase of 9% over the same month last year.

Chiefly responsible for the gain was a 19% rise in contracts for single-family houses. The total number of dwelling units represented by the residential contracts was 125,562, up 4%.

Non-residential contracts were valued at $1.2 billion up 11% over July 1958 and contracts for heavy engineering construction amounted to $775 million, down 20%.

Cumulative totals of contracts for the first seven months of 1959 with percentage changes from the corresponding period of last year are as follows: residential building at $10.6 billion, up 31%; non-residential building $6.9 billion, up 5%; heavy engineering at $5 billion down 12% and total construction at $22.5 billion, up 11%.

New Firebox in 30 Minutes

Socony Mobil lab Tests on ceramic Felt demonstrate quick combustion chamber Repair

TESTS RECENTLY COMPLETED by the Socony Mobil Laboratories demonstrate that use of a new "ceramic felt" refractory material sharply reduces the time and cost of making repairs to cracked or worn oil-burner combustion chambers.

The new material is made of alumina and silica fibers bonded together to form a flexible blanket-like substance. Used as a combustion-chamber lining, it has heat-resistant qualities at least as good as those of conventional refractory materials such as firebrick.

With ceramic felt, repair jobs that have taken up to six hours and cost as much as $75 can now be done in half an hour at a much lower cost.

Felted ceramics were originally developed for insulating aviation jet engines. Several furnace manufacturers then began factory installation of ceramic blankets in place of firebrick because of lower shipping costs and reduced breakage.

Initial tests were made by Socony Mobil research technicians on Cerafelt, a product of the Johns-Manville Corp. Additional tests are in progress on Fibrefax, a ceramic felt made by the Carborundum Co. Cerafelt may be purchased in thicknesses varying from 1/16 inch to two inches, and in weights from three pounds to 24 pounds per cubic foot. All grades are available in mats 42 inches wide and in four- and eight-foot lengths.

The tests were conducted on the ⅜-inch, 12-pound grade, which was purchased at the trade price of $1.14 per square foot. Thus, the cost of Cerafelt should not exceed—and may sometimes be less than—the cost of 2600° F. firebrick or precast material.

The first test was in a laboratory boiler that was fired continuously for 1,000 hours at a 1 gph rate. The flame was purposely directed against the Cerafelt lining. At the end of this severe test there was no disintegration or erosion of the Cerafelt. The only visible evidence of the test was a change in color from light grey to white, which was without significance. Fiber tufts could be more easily pulled from the fired material than from untested stock; however, the tests showed that damage can be prevented if reasonable care is used in vacuum cleaning furnaces and boilers.

Two subsequent tests were made in field units supplied with Cerafelt linings. One, fired at 1 gph, has operated 1447 hours. The other, fired at 1.25 gph, has operated 1654 hours. (These are actual operating hours to August 1, 1959). Again a color change was noted and tufts could be more easily pulled away, but otherwise there was no deterioration and both linings still appear to be structurally sound.

A fourth test was made in a laboratory wet-base boiler in which 1½-inch, six-pound Cerafelt was used to construct, rather than line, a combustion chamber that was fired for 100 hours. This test produced equally successful results.

The testing program showed that the combustion efficiency and noise level of burners equipped with ceramic felt lining are comparable to those of furnaces lined with lightweight insulating-type firebrick.

The ceramic blankets may be installed in any damaged brick, precast or steel combustion chamber that retains enough strength to support a new liner. Laboratory technicians found that they could measure, cut and install the flexible material through the firebox door or boiler access plate in less than 30 minutes.

(Use of ceramic felt liners is not recommended when the bricks in an existing chamber are oil-soaked due to a misfire. In this event oil-soaked bricks must be removed and a new chamber constructed.)

Installation of a ceramic felt Liner in a typical Boiler

The following describes the procedure for installing a ceramic felt liner in the worn combustion chamber of a vertical steel tube boiler. Photographs of the procedure are shown. For photographic purposes, part of the boiler jacket was removed. In actual practices, this would not be necessary.

(1) Remove the boiler access plate and measure the old chamber. This chamber is 12½″ high and 12″ in diameter. Measure the distance of the blast tube from the chamber floor (6″). Measure the diameter of the blast tube (4″).

(2) Place the felt mat on the floor or a bench top. In pencil, lay out a piece 12½″ wide (the height) and 38″ long (the diameter multiplied by 3.14). (FIGURE III).

(3) Now mark an opening for the blast tube. The blast tube measures 4″, but mark a 5″ circle (this will give you a ½″ clearance all the way round.) A suitable can may be used although an ordinary stationery store compass will do a better job. Place this circle so that the edge will be about six inches from the edge of the sheet (this way the edges will lap just to the side of the blast tube) and 5½″ from one of the long edges (blast tube height above the chamber floor minus the ½″ clearance).

(4) Cut along the pencilled lines. Either shears or a knife may be used. (FIGURE IV).

(5) Roll up the liner and insert through the boiler opening. Position the opening cut for the blast tube and push the liner back into position against the old chamber walls. (FIGURE V).

(6) Replace the access plate and fire the burner.

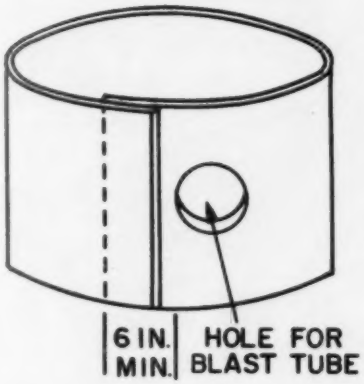


Figure I

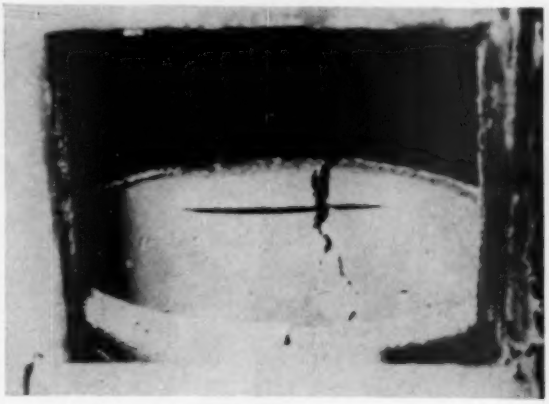


Figure II

Figure III

Figure IV

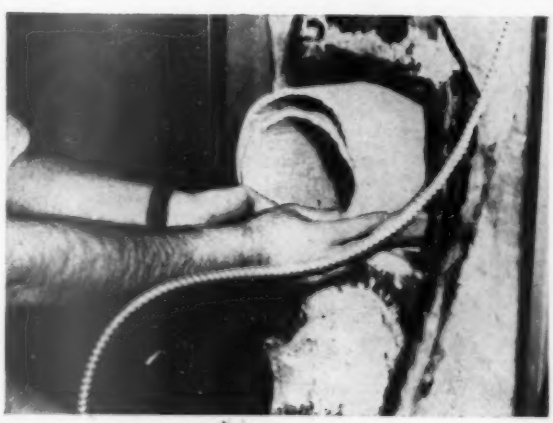


Figure V

Figure VI

Growing with Chicago for 125 Years

"IF YOU BURN COAL or oil you may win a $50 prize." You could hear the shouting long before you reached the Lill display at the 1959 Modern Living Home and Garden Show on Navy Pier in Chicago last March. One or two, sometimes three men were making the offer to all within earshot. They were getting names of homeowners who were prospects for their products. (Photo at right.)

A lot of $50 prizes were given out while the show was in progress. But that was a minor item. Lill Coal & Cil Co., Chicago, had sent out 15,000 invitations to the exhibit.

Thousands of cardboard replicas of Lill fueloil trucks were handed to interested visitors, and each truck was filled with book matches. The toy trucks displayed the Lill name in large letters, the same as the big red trucks which are seen on Chicago streets.

The ladies were presented with pot holders, each printed with the name of Lill and the products.

The display was not a single booth with a single burner or unit. It was not a case of having a man sitting in attendance ready to answer questions. It was a combination of several booth spaces, containing a whole row of Korth oilburners and several furnace-burner units, for which Lill is exclusive Chicago distributor. Four men were taking care of the crowds: they were Walter E. Eckhart, president of

Eckhart Manufacturing Co., manufacturers of the Korth oilburners in Union, New Jersey; from Lill Coal & Oil —Owen J. Reebie, vice-president and director; Don W. Wagner, manager, Heating Equipment Division and Jack Herrig, sales representative.

George Lill, II, president of Lill Coal & Oil Co., is one of the fourth generation of Chicago Lills. William Lill started in business there in 1833. That was the year when the 350 residents, in a muddy little community clustered around old Fort Dearborn, decided that their three-eighths of a square mile should be incorporated and officially named Chicago. A Lill has been identified with the development and progress of Chicago ever since.

The first of the Lills owned the property where the Tribune Tower now stands. After the great Chicago fire, a Lill went into the brick business, seeing the opportunity presented. They were building contractors and "land agents" now known as realtors. City title maps of this day officially designate some areas as "Lill Additions," and there is a Lill Street.

As the years passed, and the city grew, the need for fuel was apparent. A "George" Lill started a coal business in 1883. There were moves in 1888, 1899, 1907 and 1911, each time to larger quarters and better locations.

A presently increasing coal business in a declining market points to at least one condition. If new business is not available, they must be getting a greater percentage of the existing business, and that means aggressive sales action.

That should dismiss any notions that the Lill Coal & Oil Co. owners are not aware of what is going on around them. About ten years ago they decided that the time had come when they should be building a new fuel business to take care of heating and power requirements.

Oil became a part of their business. First a large gasoline service station, and from that start, facilities were developed to handle both light and heavy fueloil for heating.

The business grew rapidly. In 1955 Lill introduced a heating equipment division, including sales, installation, service and repairs of oilburners. They use specially-equipped station wagons for boulevard service cars. Their maintenance garage serves all coal and oil trucks and service cars, with facilities for anything from minor adjustments to complete rebuild.

"Keep-full" delivery service and budget billing were soon standard practice, and within the relatively short time since it was started, the fueloil part of the business has become an important part.

This year a new sales and display room was opened at the corner of Broadway and Berwyn, exclusively for the equipment division.

Yes, Lill Coal & Oil Co. is fully aware that there is natural gas in the Chicago area, but they are not worrying about it. They are too busy selling oilburners and fueloil.

Conference Session to be a Feature of 11th Air-Conditioning Exposition

NAMES of four speakers who will appear at the ARI "Conference Session" scheduled at Atlantic City, N. J., on November 3, as a special feature of the 11th Exposition of the Air-Conditioning and Refrigeration Industry, have been announced by R. H. Luscombe, Penn Controls and chairman of the 11th Exposition Committee.

The conference is planned to highlight dramatically the roles that applications of the refrigeration cycle—in both refrigeration and airconditioning—play in America's present mode of life, and to point out their essentiality to the health, productivity, and defense of the nation.

The speakers, who will also go into various types of applications of mechanical cooling and the need for cooperation between the industry and the users of its products, are:

- President Harold J. Humphrey, National Association of Frozen Food Packers, whose presentation will cover the vital necessity for refrigeration equipment in today's food distribution scheme, the need for proper equipment in all phases of food marketing, from production and storage through retailing and into home equipment.
- Arthur S. Goldman, market research director, *House & Home* magazine, whose field of discussion will be the market for residential airconditioning, and suggestions as to how this market may be developed by the industry.
- Joseph Rorick, assistant for planning and construction, International Business Machines Corporation, who will speak as the representative of a large industrial user of airconditioning.

In addition, it is announced that a speaker from the Defense Department will speak on the many defense activities which would be impossible, or at least extremely difficult, without mechanical cooling.

This speaker will be:

- Thomas R. Casberg, staff specialist, mechanical equipment and systems, Office of the Assistant Secretary of Defense, Properties and Installations. He is responsible for the establishment of design, construction, maintenance and operation programs related to mechanical equipment. His topic will be cooperation between the Defense Department and the people who produce the essential equipment for the thousands of airconditioning and refrigeration installations in the nation's defense establishment.

The Conference Session will be held at 9:30 a.m., Tuesday, November 3, on the stage at Atlantic City's Convention Hall, and will be presided over by R. K. Serfass, vice-president of ARI, chairman of its Planning Committee, and chairman of the committee which set up the conference session as an "added attraction."

Those attending the Conference Session also will see the world's largest exhibit of refrigeration and airconditioning equipment and will be enabled to discuss their problems with the factory experts who will be available at the various exhibits.

The Exposition will open at noon on Monday, November 2, for a four-day stand at the Convention Hall, with exhibits by more than 175 companies manufacturing equipment, supplies, components, parts, accessories, and other materials used in connection with or allied with refrigeration and airconditioning.

The show will be preceded on November 1 by a meeting of the membership of ARI.

Also meeting in Atlantic City at the time of the show will be Air-Conditioning and Refrigeration Wholesalers, National Commercial Refrigerator Sales Association, and Refrigeration Service Engineers Society.

List of Exhibitors*

11th Exposition Air-Conditioning and Refrigeration Industry

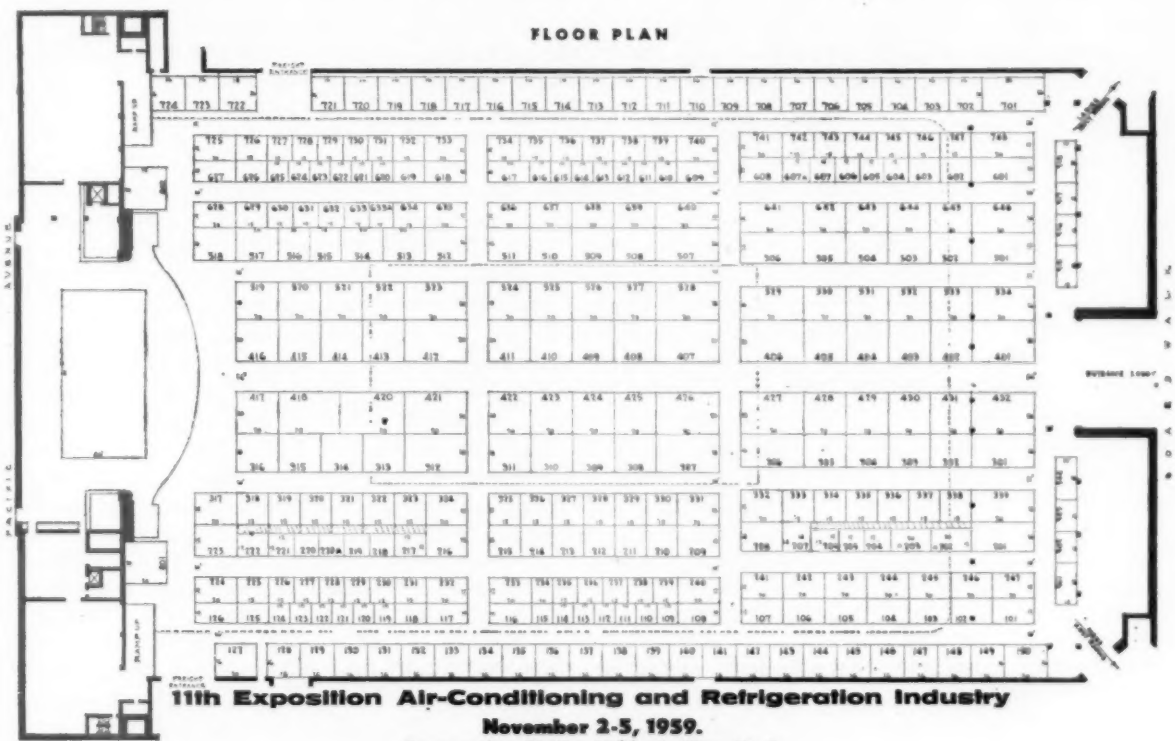
Convention Hall, Atlantic City, N. J.
November 2-5, 1959

	Space No.
Acme Steel Co.	619
Addison Products Co.	331
Aeroquip Corp.	234
Air Con Filter Co.	234
Air Conditioning, Heating & Refrigeration News	311
Airserco Mfg. Co.	740
Airtemp Div.	335-6-7-8-9
Alco Valve Co.	523
Allen-Bradley Co.	746-47
Allin Mfg. Co.	226
Alter, Harry, Co., Inc.	120
Aluminum Foundries, Inc.	629
American Automatic Ice Machine Co., Inc.	429
American Brass Co.	410
American Coils Co.	401
Ansul Chemical Co.	417
Armstrong Cork Co.	611-12
Arrow-Hart & Hegeman Electric Co.	228
Automatic Devices, Inc.	218
Avon Tube Co.	323
Bacharach Industrial Instrument Co.	624
Bally Case & Cooler Co.	620
Barr Mfg. Co.	639
Bell & Gossett Co.	324
Bendix-Westinghouse	307
Beverage-Air Sales Co.	605
Binks Mfg. Co.	242
Bohn Aluminum & Brass Corp.	223
Bundy Tubing Co.	309
Byers, A. M., Co.	237
Calgon Co.	904
Cardox Div., Chemetron Corp.	333
Carrier Corp.	413
Century Electric Co.	801
Chemical Solvent Co.	502
Clark Door Co., Inc.	917
Clayton Mark & Co.	334
Coldin Cabinet Co.	733
Controls Co. of America	641-2
Coolerator Div.	506
Copeland Refrigeration Corp.	139-40-1-2
Curtis Mfg. Co.	209
Cutler-Hammer, Inc.	332
Davison Chemical Div.	403
Delco Products Div.	509
Detroit Controls Div.	503
Detroit Stamping Co.	634
Dole Refrigerating Co.	108-9-10-11
Domestic Engineering	217
Dow Chemical Co.	643
Dunham-Bush, Inc.	422-3-4-5-6
Du Pont, E. I., de Nemours and Co., Inc.	432
Ebco Mfg. Co.	302

*As of September 10.

	Space No.
Edwards Engineering Corp.	303
ELECTRIC HEAT & Airconditioning	621
Electro Therm, Inc.	101
Elkhart Products Corp.	236
Encyclopaedia Britannica	239
Evans Mfg. Corp.	231
Federal Refrigerator Mfg. Co.	103
Fogel Refrigeration Co.	126
Foster Refrigerator Corp.	121
Frankell Mfg. Co., Inc.	238
Frick Co.	711
Frigid Igloo Mfg. Corp.	646
Frigidaire Div.	741-42
Fromson Orban Co.	304
FUELOIL & OIL HEAT	621
Furnas Electric Co.	613
GAS HEAT and comfort cooling	621
Gem Refrigerator Co.	903
General Chemical Div., Allied Chemical Corp.	534
General Controls Co.	507
General Electric Co. (Schenectady)	212-13-14-15
Handy & Harman	243
Heating Publishers, Inc.	621
Henry Valve Co.	640
Higbie Mfg. Co.	323
Highside Chemicals, Inc.	326
Hill, C. V., & Co., Inc.	608
Holsclaw Bros., Inc.	114
Howell Electric Motors	240
Hubbell Corp.	414
Imperial Brass Mfg. Co.	748
Imperial Damper Co.	204
Industrial Press	614
Jackes-Evans Mfg. Co.	609
Jamison Cold Storage Door Co.	216
Jarrow Products, Inc.	902
Kaiser Aluminum & Chemical Sales, Inc.	412
Keeney Publishing Co.	623
Kenmore Machine Products, Inc.	532
Kerotest Mfg. Co.	308
Kirsch Co.	230
Koch Refrigerators, Inc.	235
Kold-Hold Div.	415-16
Koppers Co., Inc.	319
Larkin Coils, Inc.	524-5-6
Lehigh Mfg. Co.	616-17
Lewin-Mathes Co.	915-16
McCray Refrigerator Co., Inc.	118
McIntire Co.	115-16
McQuay, Inc.	427-8
Madden Brass Products Co.	117
Market Forge Co.	125
Marley Co.	149-50
Mario Coil Co.	918
Marsh Instrument Co.	201
Meier Electric & Machine Co., Inc.	202-03
Melchior, Armstrong & Dessau Co.	418
Metals & Controls Corp.	601
Milwaukee Electric Tool Corp.	122
Minneapolis-Honeywell Regulator Co.	512
Mueller Brass Co.	406
Myers, F. E., & Bro. Co.	227
National-U. S. Radiator Corp.	306
Nickerson & Collins Co.	645
Olin Mathieson Chemical Corp.	327-28
Olsen, C. A., Mfg. Co.	402
Onan, D. W., & Sons, Inc.	626
Owens-Corning Fiberglas Corp.	701
Paragon Electric Co.	638
Peerless of America, Inc.	233
Peerless Equipment Corp.	628
Penn Controls, Inc.	505
Pennsalt Chemicals Corp.	232
R-B-M Div.	325
Ranco Inc.	312
Reading Tube Corp.	408
Recold Corp.	708-9
Refrigeration & Air Conditioning Business	618
Refrigeration Appliances, Inc.	513-14
Refrigeration Research, Inc.	208
Refrigerating Specialties Co.	409
Remington Arms Co.	731
Reynolds Metals Co.	430-31
Rheem Mfg. Co.	901
Rochester Products Div.	317
Rubatex Div.	211
C. Schmidt Co.	123
Scotsman—Queen Products Div.	636-7
Shank, Cyrus, Co.	615
Sherer-Gillett Co.	622
Skuttle Mfg. Co.	730
Sporlan Valve Co.	421
Sprague Electric Co.	246
Sprague Engineering Corp.	229
Standard Refrigeration Co.	504
Stiles-Karlsonite Corp.	119
Stokes, F. J., Corp.	728
Superior Valve & Fittings Co.	411
Taylor-Birch Refrigeration Products, Inc.	607
Tecumseh Products Co.	510-11
Temprite Products Corp.	420
Tenney Engineering, Inc.	529-30
True Mfg. Co.	533
Tyler Refrigeration Corp.	241-107
Typhoon Air Conditioning Corp.	517-18
Union Carbide Chemicals Co.	412
United Wire & Supply Corp.	247
Vibration Mountings, Inc.	205
Victory Metal Mfg. Corp.	625
Viking Air Products	221
Viking Copper Tube Co.	404
Vilter Mfg. Co.	734
Virginia Smelting Co.	528
W K M Division	604
Wabash Corp.	610
Wagner Electric Corp.	635
Walton Laboratories, Inc.	224
Warren Refrigerators	627
Watsco, Inc.	725
Westinghouse Electric Corp.	301
White-Rodgers Co.	501
Wolverine Tube, Calumet & Hecla, Inc.	519
Worthington Corp.	407
York Div.	320-22

FLOOR PLAN



11th Exposition Air-Conditioning and Refrigeration Industry

November 2-5, 1959.

Convention Hall—Atlantic City, N. J.

Typical heating oil dealer's Day seen in 'Big little Businessman'

A FIFTEEN MINUTE sound film, depicting the business day of a typical heating oil distributor, has been released, the result of cooperative activity of the National Fueloil Council and the National Association of Manufacturers.

The film will be featured this year on the prize winning public service television series, "Industry on Parade," sponsored by NAM. Under the title, "Big little Businessman," the film tells the story of a representative fuel-oil dealer, who takes his daughter—studying to be a journalist—through a business day. He shows her what makes an oilheating dealer tick, how he runs his business, how he serves his customers.

The film actually stars Francis Schuster, Troy Oil Co., Indianapolis, Ind., who really is a heating oil dealer, and his daughter, who really is studying to qualify as a journalist.

The accompanying photographs depict some of the scenes from the picture, starting with the one at which the camera selects a representative fueloil dealer from among the directors of National Fueloil Council, Schuster, himself.

The film then progresses through a typical day of the Troy Oil Co. president. The picture shows Fran Schuster and daughter talking with a couple about their oilheating and then the daughter assists Fran in a demonstration of fueloil's safety—she's dropping a lighted match into that container of fueloil. Even though she seems to be apprehensive every time she makes this test, the match is always snuffed out. The final photograph shows a fueloil truck driver using his two-way radio.

Thus, while the film shows American enterprise at work, it also exposes the viewer of the film to some of oil-heat's advantages. It tells the story in a way to emphasize that heating oil distributors are local businessmen whose great interest is their own community and whose customers can rely on them as neighbors.

In the months ahead this film will be telecast for a total audience exceeding 15 million. Prints are available from National Fueloil Council, 424 Madison Ave., New York 17, N. Y. for $50. They may be used in local areas for almost any public relations or merchandising activity; in those areas that are not covered by NAM's "Industry on Parade" program, individuals or groups can arrange for television showings. However, where NAM has a scheduled showing, television scheduling, if any, will have to wait until after the film has been telecast.

Also, NFC has prepared a guide sheet for promoting and using the film locally and has a publicity kit to complete the action that can be taken to capitalize on all the benefits possible.

Sparky laughs at motor Trouble

"World's best Serviceman" uses Facts about Electricity to avoid motor Burn-outs

by John W. Schulz

MY FRIEND Sparky had his nose tucked between two, old oilburner transformers, when I entered his workshop.

Patting one of the old transformers, Sparky explained, "These are specially souped up in a way invented by me, Sparky, the world's best oilburner serviceman. Each has a single-pole secondary, designed for 10,000 volts with 115 volts on the primary.

"My special souping up job includes changes to the primary or input connections to let me give 230 volts to the transformers without getting feedback short-circuits from the secondaries.

"I aim for 20,000 volts from each secondary. With the primaries connected in parallel, I connect the secondaries in series, polarity correct of course.

"This time I'm trying for a spark of fully 40,000 volts, and no small amount of amperage—and without getting a shock that practically kills me!"

Sparky readily admits that his weakness is fooling around with big sparks from oilburner, ignition transformers. This weakness gave him his nickname of Sparky.

His title of "the world's best oilburner serviceman" came naturally to him, Sparky always says. There's just got to be a best burner serviceman in the whole world, he explains, and it just happens to be him.

Holding two cables in his hands so that their skinned ends formed a spark gap of about two inches, Sparky ordered me to quickly close two switches, then jump back out of the way. Both fascinated and apprehensive, as I always am when taking part in Sparky's high-tension rituals, I obeyed.

A gigantic spark jumped the gap between the two wires in Sparky's hands. It quickly assumed an inverted U-shape, and its peak nearly reached the ceiling. Sparky shouted that he was being electrocuted, and I jumped and opened the two switches.

He could not explain how he got the shock, even after examining the equipment.

"Maybe I just thought I got a shock that time," he finally concluded, "because every time I try such a thing I always get a shock. Maybe I got a shock by corona effect, though juice did not break through the insulation on the high-tension cables I was holding. Then again, my yelling that a shock was killing me may have been the best way to get you to snap those two switches open quickly. My biggest idea was to get that 40,000 volt spark turned off, after I'd seen I could create it."

As we started out in my car to go to the trouble job Sparky wanted to show me, I started describing oilburner motor burn-out problems.

Driving along, I told Sparky, "Art Winkler, advertising director of FUEL-OIL & OIL HEAT, learned about the oilburner motor trouble that has plagued an executive whose work relates to the sale of big fueloil pumps for trucks and bulk plants. This executive declares that competitive fuels, mainly gas, are gaining headway where he lives in New Jersey, because of the intolerably poor oilburner service being provided by the retail fueloil companies.

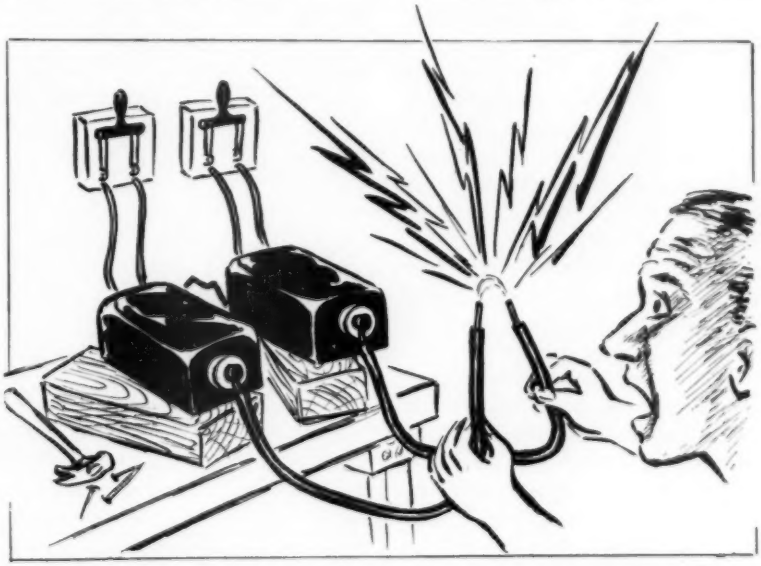
"This oil-pump executive gives an example. Three times he's had to pay big repair bills because the windings of his oilburner motor burned out, he says. The three motor burn-outs occurred within a short time, I gather, perhaps within a year or two.

"Speaking with this dissatisfied oilburner owner over the phone," I went on, "I said there were such things as overload protectors for motors. He said he's familiar with such protectors; his airconditioning plant has one, and he's had to re-set it.

"Sparky, what do you think about oilburner motors burning up, overheating with the result that they need re-winding, and what do you know about overload protectors?" I asked.

Sparky often snorts loudly, but this time, after I finished my question, he let out a snort to go down in history.

Then he started to laugh, and he laughed and laughed until I turned around for a good look at him.



"A gigantic spark jumped the gap between the two wires in Sparky's hands. It quickly assumed an inverted U-shape, and its peak nearly reached the ceiling."

Stopping the laughing abruptly, he explained, "I laugh at motor trouble that causes motor windings to burn out."

As seemingly he was putting things on a quite formal basis, I became formal also and asked, "Precisely why does Sparky, the world's best oilburner serviceman, laugh at such motor trouble?"

I received my reply from Sparky, "Because, as things stack up today, not one oilburner motor should be without overload protection. Having such protection, never does a motor burn out, become hot enough for the insulation of its windings to be damaged, as the result of excessive amperage through its windings. Any burner motor tending to become hot because of excessive motor load or low line-voltage, as examples, will be stopped promptly by its overload protection device, before its windings are damaged by excessive heat.

"Take a split-phase motor, for example," Sparky went on. "If its shaft is stuck dead-tight and can't move, its overload protection device will cut out in a matter of seconds—after current is given to the sick motor.

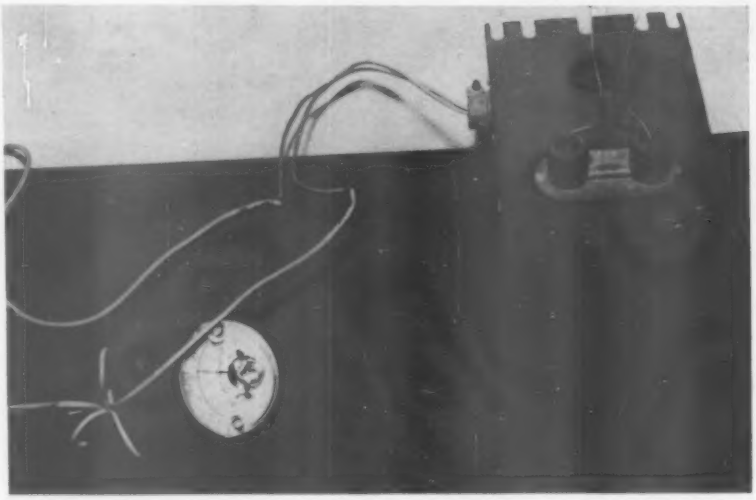
"Every, single oilburner motor should be equipped for proper, overload protection!" Sparky concluded emphatically.

Facts about Fuses

He then made two points clear about the use of ordinary fuses.

First, as anyone familiar with the National Electrical Code knows, a household circuit such as an oilburner circuit must have a fuse of maximum ampere capacity that matches the wire size of the circuit. For a circuit that includes wire of No. 14 size, a fuse of 15-ampere capacity may be used. The use of the next larger wire size in the circuit, wire size No. 12, permits the use of a 20-ampere fuse.

Higher capacity fuses may not be used, because the flow of higher amperage current through wires of these sizes can result in warming up or overheating of the wires. Fuses blow when such circuits are overloaded, because it's considered generally unsafe to have more than 15 amperes pass through No. 14 wire, or to have more than 20 amperes pass through No. 12 wires. That's the general idea for homes; for full details, study the National Electrical Code.



With one of the feed wires of this transformer looped around the Amprobe jaws five times, to gain a "five-times multiplier" effect, the instrument is reading 17 amperes on its 25-ampere scale. Flow of current to the transformer is 3.4 amperes —17 divided by five. This transformer is one of Sparky's experimental models.

Second point: An ordinary fuse, say of the 15 or 20-ampere capacity just mentioned, definitely provides no protection for a stuck or overloaded oilburner motor, or any similar motor With the motor stuck, its shaft unable to turn over for a start-up, an oilburner motor may have six to ten amperes passing through its windings when it's given juice. Such a flow of current won't blow a 15 or 20-ampere fuse in the motor circuit, but if the current continues to flow for a few minutes the motor windings are damaged by overheating—the motor windings are said to be burned out, and the motor needs re-winding.

Overloading is another thing that causes damage to motors. Suppose, to use a round number, that a certain motor draws 3.0 amperes when fully loaded. Overloaded enough to draw considerably more current, say 6.0 amperes, the motor will overheat and its windings will burn out—if the motor continues running thus overloaded for quite a few minutes. While drawing the excessive current of 6.0 amperes, perhaps because its bearings have not been lubricated for a few years and therefore are putting an excessive load on the motor, the motor will not cause 15 or 20-ampere fuses to blow. Such fuses do not protect motors. With only such a fuse in a motor circuit, as the only amperage-limiting device, the motor certainly will burn out if its shaft is stuck at the time of an attempted motor start-up, or if when running normally the motor for any reason becomes considerably overloaded.

Holding a Buss Fustat under my nose, Sparky exclaimed, "Here's one of my favorites, of which I use thousands! Marked S 3.2, it's of 3.2 amperes capacity. This is the important point: For a few seconds, plenty of time for the motor to get started while it draws relatively high amperage because it's not up to speed, this Buss Fustat will not blow out though the current passing through it is much higher than 3.2 amperes.

"For a few seconds, to permit a motor to get started, this 3.2 ampere Fustat will pass high current—six amperes, or even eight amperes, according to the number of seconds that's involved—without the Fustat blowing out.

"But if the motor shaft is stuck and won't turn when the motor should start, the 3.2 ampere Fustat will blow out. It blows out if, when the motor should start, there's a flow of high amperage current through the motor and the Fustat for a much longer period of time than there is with the motor starting properly.

"That's the way the Fustat gives a motor start-up protection," Sparky emphasized. "If the motor shaft is stuck and won't turn as it should when the motor is supposed to start, the Fustat will blow out in a matter of seconds—before there's time for the motor windings to be overheated by flow of current through them at a high rate, at the six to eight ampere rate that's needed to start some motors used in oilheating systems."

Sparky next went on to the point that one of the Fustats he installs gives a motor running protection, as well as start-up protection.

Waving the 3.2 ampere Fustat in the air, he exclaimed, "Such a time-delay fuse as this has enough brains to turn off a motor that is becoming too hot because, after running normally, it starts drawing too much current as the result of overloading.

"As long as the motor does not draw more than 3.2 amperes, the Fustat will permit it to continue running—the Fustat won't blow out. We are assuming, of course, that 3.2 amperes is the proper, maximum amperage for the particular motor; it's the motor amperage that corresponds to the motor's handling the maximum load it's built for. Handling that much load won't overheat and damage the motor.

"But if a motor bearing goes dry and starts to bind, and as the result the motor works too hard and starts drawing excessive amperage, the Fustat will blow out. It blows out before the excessive amperage, say four to eight amps, overheats and damages the motor.

"A time-delay fuse of this kind has even more magic in it than that," Sparky went on. "It will permit a motor to continue running while it handles overloads that occur only every few minutes, and that are so slight that the motor won't be overheated and damaged handling them. Doing that, it behaves as it does during a start-up of the motor, when it permits the motor to receive high-amperage current just for a few seconds, to get started.

"A time-delay fuse acts as though it knows that the flow of high-amperage current through motor windings for a few seconds won't overheat and damage them. It acts as though it's affected by the temperature of the parts inside the motor, the parts damaged by high temperatures when a motor burns out. It blows out, and stops the motor, only when the temperature of those parts, inside the motor, tends to become excessive."

Sparky showed me that the S 3.2 Fustat in his hand had a special thread. He said this corresponded to its 3.2 amperage rating. Into a usual fuse block having an Edison thread, he screws a Fustat adaptor that takes the S 3.2 Fustat with its special thread. Then only an S 3.2 Fustat, with 3.2 amperage rating, can be installed.

"I protect the motor properly when I do that," he yelled triumphantly, "because from then on no dope can screw in a Fustat of higher amperage than 3.2, and no dope can screw in a fuse rated at high amperage that won't protect the motor!"

I reminded Sparky that the word "Fustat," which he had been using is a trade name.

Other time-delay Fuses

"Another trade name is 'Fusetron,' and it's the name of a time-delay fuse that comes labelled as a dual-element fuse," I pointed out.

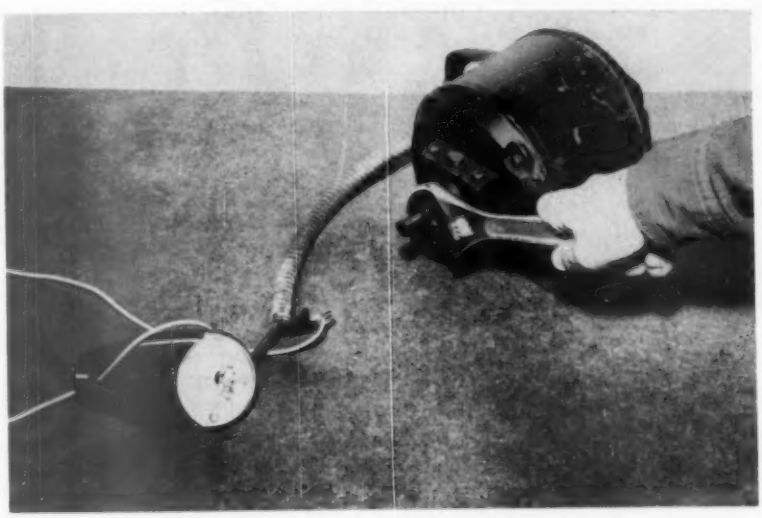
Sparky added, "Then there's the K-E Thermofuse, also a time-delay fuse. The other thing I use, the Mini-Breaker, is in a class by itself; it has the time-delay feature, but in addition it's an overload device that you re-set after an overload. It's actually a circuit breaker. After an overload causes it to trip off and break the circuit, all you have to do is press a button and re-set it. You never have to replace it. It screws right into a fuse block, replacing a usual screw-type fuse in an Edison socket."

Sparky and I agreed that smart, oilburner servicemen make a point of learning all about the trade-name, time-delay fuses we had been discussing, and about the Mini-Breaker, another trade-name device.

By this time, following Sparky's instructions, I had driven my car to the trouble job Sparky wanted me to see. I asked, "What am I here to see?"

He answered, "Sparky, the world's best oilburner serviceman, going into action on a job where burned-out motor windings have been the big, steady trouble

"I've got the motor, which just was rewound again for about the seventh time in two years, in the trunk of your car along with my tool kit. I picked it up here on the job two days ago. That was the first time I was called in to service this installation. Previously, another fueloil company did the servic-



To use an Amprobe to ascertain the amperage of any motor, just snap the instrument on one of the wires that gives current to the motor. Working on an installation, you can do this in a matter of seconds. Just open the motor's junction box, and snap the Amprobe on one of the motor's feed wires. You don't remove the insulation from the wire! With the shaft of this motor being held by a wrench, in this photograph this Amprobe shows that the motor is drawing 10 amperes.

Serviceman is using a really complete Amprobe instrument, which reads ohms as well as volts and amperes, to check the input of current to an electric preheater of a burner using No. 6 oil. The instrument shows that the heater is drawing 20 amperes; it also shows when the automatic heater is on and off.

ing. Now, the oil company I'm associated with will do the servicing, and will supply the oil.

"To get the oil account, I guaranteed the owner that never will another motor fail, burn out, and need new windings. He was skeptical—not knowing me to be the world's best oil-burner serviceman. I clinched the deal by putting a guarantee in writing; if a motor burns out while we are servicing the installation and supplying the oil, we'll make no charge for having it rewound."

I asked Sparky why so many motor burn-outs had occurred.

He indicated he had checked on that thoroughly. The motor carries practically its maximum, rated load. But it does nicely as long as the line voltage does not drop considerably. The utility supplying the electricity admits that three or four times a year the line voltage drops about 20% below what it should be, because of shortcomings in the distribution system. That line-voltage trouble is being studied, the utility men say, and will be remedied as soon as possible, perhaps within a year.

"The line voltage drops 20% three or four times a year," Sparky concluded. "If this motor was running when the line voltage dropped, the motor input amperage increased sufficiently to heat up and burn out the motor.

"The motor lacked overload protection. Just watch me work at giving it proper overload protection."

Again he put one of his Fustats under my nose. He announced, "This little gadget, which costs all of 15¢, is going to do the big trick of preventing future burn-outs of motors!"

Sparky's Procedure

Sparky's procedure, demonstrated to me, consisted of these steps:

First, he used an Amprobe, which is a snap-around ammeter and a voltmeter, to read the line voltage of the motor circuit with the motor idle, and with the motor running as usual fully loaded.

"You check the line voltage in the building," he explained, "and you check for voltage drop at the motor terminals with the motor running. You need all the facts you can get about the electricity."

Second, with the motor running, he used his Amprobe to read its input amperes. He made a note of the number.

Third, he checked the number with the amperage number on the motor's label, representing the input amperes for the maximum load the motor should carry.

"You should not get an amperage reading of 4.5," he said, "from a motor stamped for 2.5 maximum amperes. For such a motor, any reading appreciably above 2.5 amperes, on your Amprobe, would represent overloading and overheating of the motor—if the line voltage, previously checked, is all right. But many motors, particularly those that don't run steadily for hours at a time, and in relatively cool locations, perform perfectly although the ammeter shows they draw 10% to 15% more amperage than is stamped as the maximum on their labels."

Fourth, taking into consideration all the facts that he had learned, he selected the proper capacity of the time-delay fuse for the motor, and he installed a fuse of this rating.

Because Sparky wanted to give me a full demonstration, and also wanted extra reassurance for himself on this headache job whose performance he had rigidly guaranteed, he took two more steps.

Two more Steps

First step: With the motor running normally carrying its full load, and with an Amprobe reading its input current, he used a stick of wood as a brake on the motor shaft to put additional load on the motor. He made the ammeter reading increase 25% above normal. Because of this, within one minute the Fustat blew out, stopping and protecting the motor.

Second step: After replacing the Fustat, Sparky blocked the motor shaft so that it could not budge. Then he turned on the motor. In a matter of seconds, perhaps in a length of time three times as long as this motor normally takes to get up to speed, the second Fustat blew out

After thus demonstrating that this motor had protection, in good working order, both for starting and running, Sparky said, "It's good to make the same, two tests of those motors which have built-in overload protectors. If you have any reason to worry about the dependable action of a built-in overload protector, you can consider giving the motor the additional protection of a time-delay fuse—of course of the proper amperage rating for the particular motor."

Ready to leave Sparky, I drove away a few feet in my car, then stopped and called out to him, "What is corona effect?"

He hesitated a moment, then said, "Don't ask me! You've got more books than I have. Look up corona effect in one of your books. I'm no walking dictionary, I'm just the best serviceman in the world!"

After saying goodbye again properly, I again started to drive away. But I stopped and Sparky said:

"Lots of men use words they can't fully explain," he protested. "For example, I know a fellow who always speaks about ionization of the air, but to save his life he couldn't tell you the meaning of the words 'ion,' 'ionic,' and 'ionization.' "

Now It's on the Bag

BROADCASTING THE VALUES of oil heat to the consumer is a continuous process in the fueloil business. Another step forward was recently taken by the Oil Heat Institute of Long Island in cooperation with Oil-Heat Institute of America and the Nassau-Suffolk Petroleum Council. Together they designed and carried out a program for bringing the qualities of oil heat to the attention of present and potential users. This time the medium was the common shoping bag.

Since the early development of the super market each has utilized the space on shopping bags for its own advertising. Usually the bag had the company's name and emblem imprinted on the outside surface. Recently this space was made available for general advertising through an organization known as the Super Markets Affiliates.

The idea of utilizing this space to advertise petroleum products and fueloil was brought to the attention of the Long Island dealers by OHI of America working with Super Markets Affiliates. Several of the dealers thought enough of this medium to introduce it as a special promotion during the centennial year. Thus, OHI of Long Island and the Nassau-Suffolk Petroleum Council worked out a program that would amplify the information brought to the attention of consumers.

By design, the timing of this program corresponded with the celebration of oil's first century in America. In this way the oil industry was able to advertise its centennial and promote its products.

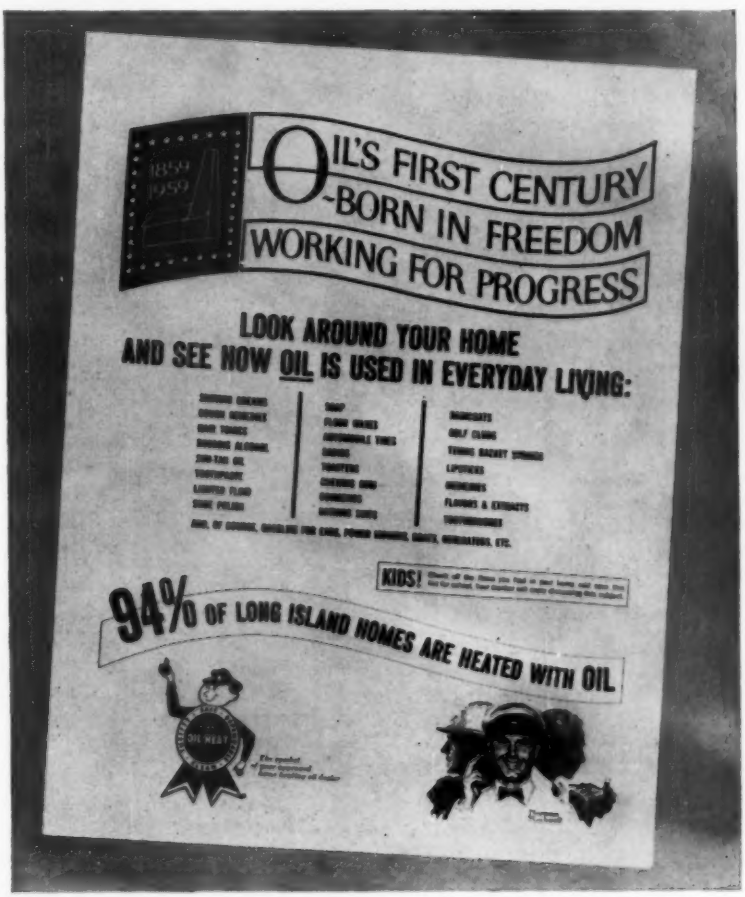
The program called for imprinting of advertising matter on 1,800,000 bags. These bags then were distributed in the usual manner, as food containers, by the super markets in Nassau and Suffolk Counties in New York. Starting September 1 these bags were issued for a period of about five weeks. It is estimated that approximately 400,000 families in this area at some time or other picked up at least one of these bags. Statistically, each family should have picked up an average of between four and five bags.

The supporters of this campaign considered this medium quite valuable. It is recognized that these bags have a prolonged utility in the home. Beyond the initial viewing, at the time of the original purchase at the super market, the housewife is sure to find additional uses for these bags. It is a usual practice around the home to save these bags and use them again for packaging, storing, wrapping, waste disposal containers, school book covers, and a multiplicity of other purposes. Hence, the ad is repeatedly reintroduced to the family.

The value of this ad is also enhanced by the absence of competition. Whereas, in most other media an individual ad is frequently lost among many ads, in this instance the message stands alone and in constant view of the person handling the containers.

The costs involved in this campaign were largely carried by the Nassau-Suffolk Petroleum Council as a representative of the major oil companies. This organization contributed close to $4,000 for the purchase and distribution of the bags. The art work, which amounted to $400, was paid for by the OHI of Long Island.

It should be recognized that this medium represents a new venture in advertising for industries other than the food companies. As such, its real value is an unknown quantity. However, all persons concerned with this effort are very enthusiastic. They are sure that it should definitely add greater substance to the story that fueloil dealers have been trying to get across to the public.



Titusville has a happy Day, oilmen and residents celebrate

ALL OF THIS YEAR is the time for celebrating the centennial for the oil industry. That is, so far as the public is concerned the fueloil and oilheating men have a marvelous opportunity for special publicity.

The most important single day to oilmen themselves was August 27 the exact anniversary of the big event. Quite a few thousand joined the pilgrimage to Titusville. The most satisfaction was in being there, not in trying to write about it.

There were many speeches, all good, ball games, square dances, pageants, parades, almost anything you could think of as celebration material. These lasted throughout the week. These few photos record typical incidents and comments.

A shallow oil well drilled to 400 feet and shot on "C" Day brought in small producer for the benefit of television viewers across the nation.

"There has been throughout the years constant recurrent talk about running out of oil. We are not running out of oil. There is at the present time in the United States the reserve daily producing ability of 3 million barrels of oil; that is we can produce 3 million barrels more oil than we are now producing from the wells presently drilled at their most efficient rate. It should be remembered that under proper conservation rules, with the wells producing no faster than their most efficient rate, it is entirely possible to recover four times as much of the oil in place as was formerly recovered under old open flow methods."

—General Ernest O. Thompson
Chairman
Texas Railroad Commission

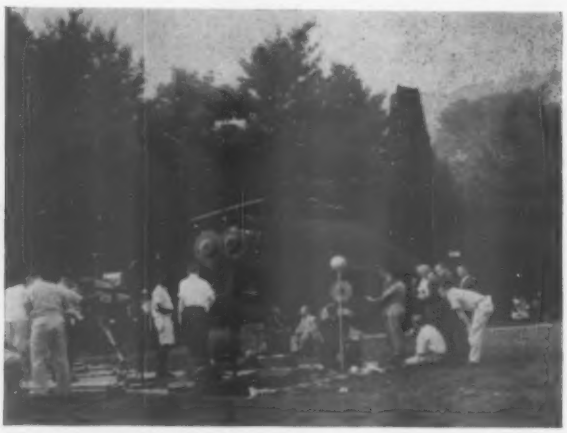
Carson

Thompson

"We need to provide the economic and political climate that will stimulate the finding of oil. We owe a great debt to the members of the oil industry who are honored here today. They have unlocked Mother Earth's treasure chest and have provided for all of us a more abundant life.

"Oil is the essence of empire and the demand on the oil industry will be of empire proportions as it strives to provide its share of the Nation's energy needs. As we look back over the two world wars and the prodigious growth of our Nation we must realize anew with what foresight President Coolidge wrote in 1924 that: 'The supremacy of Nations may be determined by the possession of available petroleum and its products.' "

—Captain Matthew V. Carson, Jr.
Director, Office of Oil and Gas
Department of the Interior



The early morning mists of the big day found Dave Garroway in active discussion with Gen. Ernest Thompson on behalf of nationwide television, against a backdrop of the Drake Well reproduction in the memorial park at Titusville. Later parts of the show brought in an ancient fire fighting unit, a nitroglycerin buggy and a small cannon used to snuff out early day oil well fires.

Arthur E. Summerfield, Postmaster General of the United States, tells his audience: "It is generally forecast that, in our country alone, energy requirements by 1975 will increase by 94%. And we have complete confidence that this industry will supply most of this increase—because you who lead it have shown that no challenge is too great for you to accept and meet."

"It was Drake's oil which nourished the body of America into the greatest nation of the world. Today, this Nation's refineries turn out more than 2.6 billion barrels each year —more than one-third of all the crude petroleum of the world—and although a mere bucketful in the tanks of the world's production — Pennsylvania crude is still the quality product of all the oil produced in the world. And we are proud of it.

"Drake's pump unlocked the reservoir of energy that brought the earth more progress than in the previous 6,000 years—the greatest single discovery since the wheel."

—David L. Lawrence
Governor of Pennsylvania

With nine thousand inhabitants, Titusville has more than its share of victorian mansions built by rich oil producers. This one originally designed for Colonel Carter, founder of Carter Oil Co., was later bought and occupied by the McKinney family, also famous in early Tulsa history. For the past several years, it has been in the hands of a caretaker, but it was reopened and spruced up in delightful style for a Centennial party where 500 oil men and wives were beautifully entertained on the evening preceding the big day.

The earliest form of tank car was presented to the Drake Memorial Park on Centennial Day by B. C. Graves, president of the Union Tank Car Co. Also taking part in this ceremony were Dr. S. K. Stevens, executive director, Pennsylvania Historical and Museum Commission, and Paul Giddens, former curator of the Drake Well Park Museum.

End of a hot and happy day. Several hundred guests moved out to the Titusville Country Club for a very satisfying barbecue and evening shindig complete with fireworks.

Five regions and 14 marketing districts of the National Survey of Burner-Fueloils 1959.

Petroleum products Survey No. 11 is Study of Burner-Fueloils, 1959

A STUDY of the properties of burner-fuel oils is given in the report "Petroleum Products Survey No. 11, Burner-Fueloils, 1959," recently issued by the Bureau of Mines, U. S. Department of the Interior, prepared by O. C. Blade, Bartlesville Petroleum Research Center, Bureau of Mines, U. S. Department of the Interior. This survey was conducted at the request of the Oil-Heat Institute of America, Inc., and the petroleum industry, under a cooperative agreement between the Bureau of Mines and the American Petroleum Institute and is the fifth such survey reported.

Under the cooperative agreement, samples of burner-fueloils, typical of their manufacture during the early part of 1959, were analyzed by the refiners and the results were transmitted to the Bureau of Mines for study and compilation. Data on 404 samples were submitted by 44 petroleum refining companies.

Table 2—Summary of Grade 2 Fuels, Burner Fueloil Survey, 1959

Geographic distribution of burner fueloils[1]				Eastern region			Southern region			Central region			Rocky Mountain region			Western region		
Districts within region				A, B, C			D			E, F, G			H, I, J, K			L, M, N		
Additional districts[2]				D, E, F, G			A, B, C, E, F, G			A, B, C, D, J			G, L			H, I, K		
Number of fuels				59			22			46			19			23		
Test	ASTM D396 requirements Method	Min.	Max.	Min.	Avg.	Max.	Min.	Avg.	Max.	Min.	Avg.	Max.	Min.	Avg.	Max.	Min.	Avg.	Max.
Gravity ..... ° API	D287	26	..	24.5	34.9	45.2	29.1	34.8	47.0	27.4	35.2	39.1	22.4	34.1	40.7	26.5	33.8	40.7
Flash point, Pensky-Martens closed tester ..... ° F.	D93	100	..	125	..	225	140	..	180	138	..	225	142	..	200	126	..	230
Viscosity																		
Kinematic at 100° F. .....centistokes	D445	..	4.3	2.03	2.57	3.50	1.9	2.54	3.27	2.14	2.48	3.10	1.94	2.70	3.64	1.50	2.85	4.28
Cloud test ..... ° F.	D97	..	..	—14	..	24	—30	..	16	—18	..	16	—24	..	12	—50	..	25
Pour point ..... ° F.	D97	..	20	—25	..	20	—40	..	0	—20	..	0	—35	..	5	—40	..	20
Sulfur content .....wt. percent	D129	..	1.0	0.05	0.260	0.73	0.06	0.305	1.08	0.095	0.309	1.08	0.09	0.506	1.64	0.04	0.507	1.35
Aniline point ..... ° F.	D611	..	..	97.5	140.2	176	117	140.0	160.9	99.0	138.4	160.9	48	132.5	159	93	137.3	155
Ramsbottom carbon residue on 10 percent residue .....percent	D524	..	0.35	0.05	0.122	0.236	0.06	0.132	0.23	0.019	0.129	.3	0.06	0.113	0.28	0.06	0.102	0.15
Corrosion, 3 hours at 122° F. .....No.	D130	..	..	1	...	1	1	...	1	1	...	1	1	...	1	1	...	2
Ash[3] .....percent	D482	..	..	0.000	0.000	0.001	0.000	0.000	0.001	0.00	0.000	0.003	0.00	0.000	Trace	0.00	0.000	0.004
Water and sediment .....vol. percent	D96	..	0.10	0.0	0.0	0.10	0.0	0.0	0.10	0.0	0.0	0.05	0.0	0.0	Trace	.0	0.0	Trace
Distillation test, on volume recovered basis:	D158																	
Initial boiling point ..... ° F.		..	...	312	365	450	321	362	408	321	361	450	341	389	441	337	384	450
10 percent		..	[4]440	379	427	493	382	425	450	379	422	477	378	442	485	367	442	498
50 percent		..	...	435	500	551	428	503	526	475	498	526	445	497	537	407	503	562
90 percent		..	675	517	580	617	450	582	619	534	577	619	503	567	627	455	583	634
End point		..	..	583	635	666	540	636	665	570	627	665	541	622	680	497	639	691

[1]Regions and districts are shown on map (fig. 1). [2]Some of the fuels are sold in districts of more than one region. [3]Figures for ash are not shown in the tables of detailed analyses as they were not required for the grade. However, some data, less than one-fourth of the analyses, contained results of the test which are summarized here. [4]Footnote in table 1 of ASTM D396-48T: "The 10 percent point may be specified at 440° F. maximum for use in other than atomizing burners."

Table 1—Summary of Grade 1 Fuels, Burner Fueloil Survey, 1959

Geographic distribution of burner fueloils[1] / Districts within region / Additional districts[2] / Number of fuels / Test	ASTM D396 requirements Method	Min.	Max.	Eastern region A, B, C D, E, F, G 43 Min.	Avg.	Max.	Southern region D A, B, C, E, F, G 16 Min.	Avg.	Max.	Central region E, F, G A, B, C, D, J 44 Min.	Avg.	Max.	Rocky Mountain region H, I, J, K G, L 20 Min.	Avg.	Max.	Western region L, M, N H, I, K 18 Min.	Avg.	Max.
Gravity ..... ° API	D287	35	..	38.3	42.9	46.6	38.3	42.3	44.6	38.3	42.4	46.5	38.2	41.5	44.9	36.7	39.6	43.4
Flash point, Tag closed tester ... ° F.	D56[3]	100	..	115	..	158	123	..	146	124	..	155	122	..	180	122	..	155
Viscosity																		
Kinematic at 100° F. ....centistokes	D445	1.4	2.2	1.40	1.72	2.54	1.5	1.74	2.2	1.5	1.79	2.20	1.5	1.75	2.5	1.50	1.81	2.11
Cloud test ..... ° F.	D97	..	..	—64	..	—4	—64	..	—16	—64	..	—10	—58	..	—15	—60	..	—20
Pour point ..... ° F.	D97	..	0	—75	..	—10	—75	..	—30	—75	..	—25	—55	..	—25	—60	..	—20
Sulfur content .....wt. percent	D129	..	0.5	0.004	0.065	0.15	0.02	0.063	0.20	0.012	0.111	0.51	0.012	0.181	0.90	0.01	0.216	0.90
Aniline point ..... ° F.	D611	..	..	140.0	150.1	168.0	140.0	148.2	161.0	140.0	151.0	161.0	138	146.4	154	134.5	145.5	159.1
Ramsbottom carbon residue																		
on 10 percent residue .....percent	D524	..	0.15	0.02	0.061	.2	0.02	0.054	0.08	.0	0.064	.3	0.0	0.049	0.104	.0	0.073	0.11
Corrosion, 3 hours at 122° F. .....No.	D130	..	3	1	..	1	1	..	2	1	..	2	1	..	2	1	..	1
Ash[4] .....percent	D482	..	..	0.00	0.00	0.002	0.00	0.00	0.00	0.00	0.00	0.004	0.00	0.00	0.0002	0.00	0.00	0.00
Water and sediment .....vol. percent	D96	..	Trace	0.0	0.0	Trace	0.0	0.0	Trace	0.0	0.0	Trace	0.0	0.0	Trace	0.0	0.0	Trace
Distillation test,																		
on volume recovered basis:	D86																	
Initial boiling point ..... ° F.		..	..	325	348	383	325	344	380	323	349	386	331	359	388	314	351	376
10 percent		..	420	358	383	424	368	382	416	362	386	420	350	395	438	367	396	418
50 percent		..	..	401	430	497	412	433	470	404	437	483	404	436	475	407	441	466
90 percent		..	..	441	491	579	464	497	550	454	504	550	457	494	525	455	498	540
End point		..	625	475	531	616	500	535	608	495	544	608	501	540	579	497	545	592

[1]Regions and districts are shown on map (fig. 1). [2]Some of the fuels are sold in districts of more than one region. [3]This method was selected for Grade 1 burner fueloils for the survey although ASTM D396-48T, Tentative Specifications for Fueloils, specifies flash point by Pensky-Martens Closed Tester (ASTM D93). [4]Figures for ash are not shown in the tables of detailed analyses as they were not required for this grade. However, some data, less than one-fourth of the analyses, contained results of the test which are summarized here.

Table 3—Summary of Grade 4 Fuels, Burner Fueloil Survey, 1959

Geographic distribution of burner fueloils[1] / Districts within region / Additional districts[2] / Number of fuels / Test	ASTM D396 requirements Method	Min.	Max.	Eastern region A, B, C D, E, F, G 19 Min.	Avg.	Max.	Southern region D A, B, C, E 2 Min.	Avg.	Max.	Central region E, F, G A, B, C, D, H, K, L 8 Min.	Avg.	Max.	Rocky Mountain region H, I, J, K F, L 3 Min.	Avg.	Max.	Western region L, M, N F, H, I, K 2 Min.	Avg.	Max.
Gravity ..... ° API	D287	..	..	9.6	21.9	32.2	26.0	(3)	28.5	9.1	19.3	28.5	15.3	22.8	30.0	15.3	(3)	30.0
Flash point, Pensky-Martens																		
closed tester ..... ° F.	D93	130	..	158	..	240	200	..	220	160	..	240	182	..	240	220	..	240
Viscosity																		
Kinematic at 100° F. ....centistokes	D445	5.8	26.4	5.7	16.89	35.8	4.73	(3)	5.7	5.7	15.94	21.7	4.3	(3)	20.1	4.3	(3)	20.1
Cloud test ..... ° F.	D97	..	..	..	..	..	..	..	..	..	..	..	..	[4]20	..	..	[4]20	..
Pour point ..... ° F.	D97	..	20	—35	..	15	—15	..	10	—35	..	15	—35	..	10	—35	..	10
Sulfur content .....wt. percent	D129	..	..	0.22	0.77	1.85	0.23	(3)	0.70	0.23	1.13	3.25	1.60	(3)	2.10	..	[4]2.10	..
Aniline point ..... ° F.	D611	..	..	..	[4]167.5	..	..	..	..	..	..	..	..	..	..	..	..	..
Ramsbottom carbon residue																		
on 100 percent sample .....percent	D524	..	..	0.23	3.42	6.5	0.38	..	1.83	1.83	4.35	6.0	..	[4]2.15	..	..	..	..
Corrosion, 3 hours at 122° F. .....No.	D130	..	..	[4]1	..	..	..	..	..	..	..	..	[4]1	..	..	[4]1	..	..
Ash .....percent	D482	..	0.10	0.000	0.011	0.046	..	[4]0.01	..	0.001	0.018	0.046	0.00	(3)	0.012	0.00	(3)	0.012
Water and sediment .....vol. percent	D96	..	0.50	0.0	0.16	0.5	Trace	(3)	0.05	Trace	0.12	0.2	0.0	(3)	Trace	0.0	(3)	Trace
Distillation test,																		
on volume recovered basis:	D158																	
Initial boiling point ..... ° F.		..	..	..	[4]417	..	..	..	..	..	..	..	..	[4]400	..	..	[4]400	..
10 percent		..	..	..	535	..	..	..	..	..	..	..	..	522	..	..	522	..
50 percent		..	..	..	649	..	..	..	..	..	..	..	..	584	..	..	584	..
90 percent		..	..	..	693	..	..	..	..	..	..	..	..	634	..	..	634	..
End point		..	..	..	693	..	..	..	..	..	..	..	..	664	..	..	664	..

[1]Regions and districts are shown on map (fig. 1). [2]Some of the fuels are sold in districts of more than one region. [3]No averages were computed as only two samples were represented for this test. [4]Result of test on one sample.

Table 4—Summary of Grade 5 Fuels, Burner Fueloil Survey, 1959

Geographic distribution of burner fueloils[1] / Districts within region / Additional districts[2] / Number of fuels / Test	ASTM D396 requirements Method	Min.	Max.	Eastern region A, B, C D, E, F, G 17 Min.	Avg.	Max.	Southern region D A, B, C, E, G 6 Min.	Avg.	Max.	Central region E, F, G A, C, D, H, K, L 16 Min.	Avg.	Max.	Rocky Mountain region H, I, J, K L 6 Min.	Avg.	Max.	Western region L, M, N F, H, I, K 13 Min.	Avg.	Max.
Gravity ..... ° API	D287	..	..	8.4	17.0	22.0	14.4	16.2	18.5	6.4	14.9	23.7	8.0	14.7	19.9	10.8	13.6	17.8
Flash point, Pensky-Martens																		
closed tester ..... ° F.	D93	130	..	160	..	250	160	..	220	160	..	230	160	..	240	162	..	240
Viscosity																		
Kinematic at 100° F. ....centistokes	D445	32.1	..	25.2	70.9	167	53.1	139.0	355.4	36.6	75.0	140.2	52.0	162.5	370	52.0	99.4	160
Furol at 122° F. .....seconds	D88	..	40	13	25.0	43	17.5	35.9	81.0	13.0	24.2	43	22.8	44.6	72.0	20	29.6	37
Pour point ..... ° F.	D97	..	..	—40	..	55	—10	..	40	—20	..	55	—20	..	85	—25	..	45
Sulfur content .....percent	D129	..	..	0.25	0.98	1.90	1.0	2.06	3.00	0.62	1.53	3.50	1.06	2.41	4.60	0.82	1.60	4.60
Ramsbottom carbon residue																		
on 100 percent sample .....percent	D524	..	..	3.70	6.26	8.34	3.76	6.97	11.44	3.76	6.74	10.16	4.4	6.70	9.38	4.3	8.55	14.5
Ash .....percent	D482	..	0.10	0.000	0.023	0.078	0.015	0.036	.06	0.001	0.027	0.078	Trace	0.019	.05	0.01	0.035	0.07
Water and sediment .....vol. percent	D96	..	1.00	Trace	0.17	0.4	Trace	0.13	0.2	Trace	0.14	0.3	Trace	0.12	0.2	Trace	0.11	0.20

[1]Regions and districts are shown on map (fig. 1). [2]Some of the fuels are sold in districts of more than one region. [3]No average was computed as less than half the number of samples was represented.

Table 5—Summary of Grade 6 Fuels, Burner Fueloil Survey, 1959

Geographic distribution of burner fueloils[1] / Districts within region / Additional districts[2] / Number of fuels / Test	ASTM D396 requirements Method	Min.	Max.	Eastern region A, B, C D, E 38 Min.	Avg.	Max.	Southern region D A, B, C, E, G, J 22 Min.	Avg.	Max.	Central region E, F, G A, B, C, D, H, I, J, K 32 Min.	Avg.	Max.	Rocky Mountain region H, I, J, K D, E, F, G, L, M 21 Min.	Avg.	Max.	Western region L, M, N F, H, I, K 23 Min.	Avg.	Max.
Gravity ..... ° API	D287	..	..	6.0	12.9	17.6	2.6	11.4	15.0	—0.7	10.2	17.0	2.5	8.8	17.6	2.6	8.2	15.5
Flash point, Pensky-Martens																		
closed tester ..... ° F.	D93	150	..	170	..	270	170	..	295	170	..	295	155	..	375	170	..	360
Viscosity																		
Furol at 122° F. .....seconds	D88	45	300	45	169.3	287	58.7	163.2	262	78.2	184.4	297	15	151.6	280	95	165.5	470
Pour point ..... ° F.	D97	..	..	0	..	60	0	..	75	15	..	75	0	..	85	15	..	80
Sulfur content .....percent	D129	..	..	0.51	1.47	3.45	0.51	1.41	3.59	0.511	1.47	3.80	0.56	2.06	5.25	0.87	1.76	5.25
Ramsbottom carbon residue																		
on 100 percent sample .....percent	D524	..	..	4.52	10.11	17.0	4.20	9.97	15.25	4.20	10.35	19.14	5.8	11.05	18.65	5.8	13.00	18.8
Ash .....percent	D482	..	..	0.005	0.059	0.30	0.001	0.058	.14	0.003	0.045	.14	0.005	0.046	.14	0.00	0.049	0.13
Water and sediment .....vol. percent	D96	..	2.00	0.03	0.23	0.8	0.06	0.26	0.8	0.05	0.25	0.7	0.10	0.33	2.0	.01	0.27	2.0

[1]Regions and districts are shown on map (fig. 1). [2]Some of the fuels are sold in districts of more than one region.

Empire State Petroleum Meeting considers how Dealers can improve fueloil Operations

THE FALL MEETING of the Empire State Petroleum Association took place September 13-15 at Saranac Inn, N. Y. The Monday morning meeting, September 14, was devoted to an intense discussion of the topic, "More Profit through efficient fueloil Operation."

Moderator of the program was L. S. Marshman, manager, Wholesale Planning Dept., Mobil Oil Co., who introduced four panelists and conducted an open session of questions and answers at the conclusion of the presentations.

Marshman emphasized the need for more efficient operation by fueloil distributors by mentioning that while gas heating has offered stiff competition in past years and will continue to do so, electric heat now was becoming a factor in some areas.

He continued with the reminder that the strongest defense a heating oil dealer could present against competitive fuels resulted from offering a complete comfort package. This enabled the dealer to furnish his customers the burner service they might need, as well as the fueloil for their heating plants and replacement or new equipment as they require it.

Why are We in burner Service?

WILLIAM G. KANE, president and general manager, Lewis Associates, Port Washington, N. Y., the first panelist, discussed the broad aspects of burner service. He pointed out at the beginning that his company —and all companies—were rendering burner service basically because they wanted new business and wanted to retain their present customers, which perhaps was the more important of the two reasons.

He made the point that the serviceman generally represents the only contact a fueloil dealer will have with his customers. Upon the impression he makes and the kind of work he performs depends to a large extent the acceptance that a company earns with the customer. Discuss the importance of service with every single person in your organization, advised Kane.

Kane explained that if a homeowner has a complaint about his oilheating, or discovers something wrong with it, if he has to go to an outside organization to inquire about oilburner service —whether this be another fueloil competitor or a heating contractor—the fueloil dealer supplying this customer is vulnerable. In the first place, the fueloil competitor is going to try to get a fueloil customer, with the logical explanation that as a fuel supplier, he can be responsible for the service work, as well. The heating serviceman with no fuel loyalty is liable to try to change fuels rather than correct a deficiency. And, "when you lose a customer because of poor service, you can forget him."

Though we like to think that a customer has made a mistake when he changes to gas and can be induced to convert back later, Kane said, this just doesn't happen. The investment to change back is too substantial. Remember, too, he added, that your best bet to prevent customer losses to gas is to keep his equipment operating at top efficiency, even if you have to sell him a replacement job to do this. It's all too true that it can cost less to heat with gas when the gas replacement consists of an integral unit and the customer had been paying for heat from an old or inefficient oilburner.

"The customer should have been told that he could save much more with an oil unit," Kane declared, "but you have to tell the customer or at least make sure that he's aware of it."

Further, Kane had this advice, "If you are not in the service business you had better get into it; if somebody else is responsible for servicing the burners to which you deliver fueloil, he has a definite control over your customer." The customer buys heating comfort and if the fueloil distributor cannot give it to him, he stands a good chance of losing him.

The customer expects his fueloil dealer to service his burner and get heat to every room of his house, plus all the hot water he can use. If this is not possible, Kane advised, use your service department to find out why, explain to the customer the reason for this deficiency and make sure that you offer him the means to correct it.

Aside from the typical precautions that servicemen should take to leave a job clean and neat, Kane offered these suggestions for fueloil distributors to consider: Provide an all-inclusive service contract at a reasonable cost; make at least a once-a-year inspection of the equipment; provide prompt service; check the job completely everytime a serviceman calls; set up your records so that you know what is in a customer's basement; listen to the customer; use combustion instruments; insist on good housekeeping and be sure that your servicemen are clean and neat-appearing.

Burners in new Homes

DISCUSSING the sale of oilheating equipment to builders, Leonard Braun, Piping Rock Fuel Corp., Halesite, N. Y., pointed out that the average home builder basically is interested in producing a good house with the best of equipment so that he can sell it with a minimum of trouble. Also, he's interested in cutting costs as much as the oilheating dealers are interested in cutting their costs.

The builder, Braun contended, is an astute business man who sees an aggressive merchandiser selling him gas equipment at a better price with a better deal. How can the oilheating industry show builders that we can help him sell his houses?

Braun explained that the Oil Heat Institute of Long Island has prepared a selling manual which enables fueloil dealers' salesmen to sell strong and hard. "We sell right out in the field; we sell that there is no heat like oil heat; we sell the fact that oil heat is best and that you pay much less to heat better with oil. We advertise it; we display it; we eat it; we are awake with it."

(*Please turn to page* 118)

Oilheating Bolstered by Campaigns

QUESTIONNAIRES returned by our readers for the September issue fueloil management study were identified as coming from markets located in areas where local cooperative advertising are conducted. These are the programs sponsored either by the National Fueloil Council or the Industry Advisory Committee in the Pacific Northwest.

A comparative analysis with non-campaign cities of some of the data reported on the questionnaires points up the better conditions that exist in markets having cooperative advertising programs.

Typical attitudes or experiences between the two characteristic groups are reflected in the four charts reproduced below.

The upper left hand chart, for example, shows the rating of new sales of oilheating equipment in the first seven months of this year. Notice that in cities with campaigns this ratio is 35% oil; in cities without programs it is 28%.

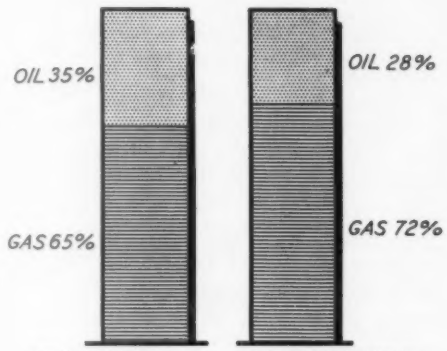
The relative degree of losses to other fuels (upper right) is based on the heating season of 1958-59. The cities with cooperative campaigns lost 8.4 oil users per 1,000 customers; in the non-campaign cities losses were 14.9.

Fueloil distributors in campaign cities spent $2.28 per customer on private advertising; distributors in non-campaign cities spent $1.78.

Finally, 75% of the companies in campaign cities feel their margins are adequate, compared with only 51% of the companies in non-campaign cities.

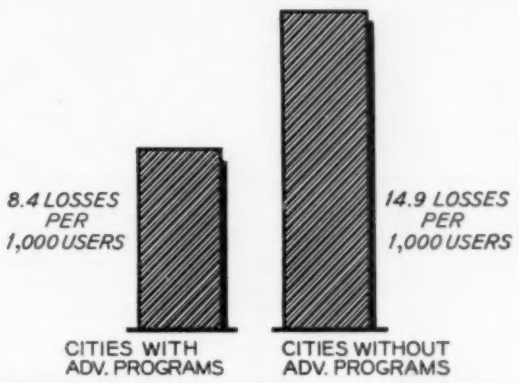
THE CAMPAIGNS ARE HELPING

NEW OILHEATING JOBS
INSTALLED 1959
IN CITIES HAVING NATURAL GAS



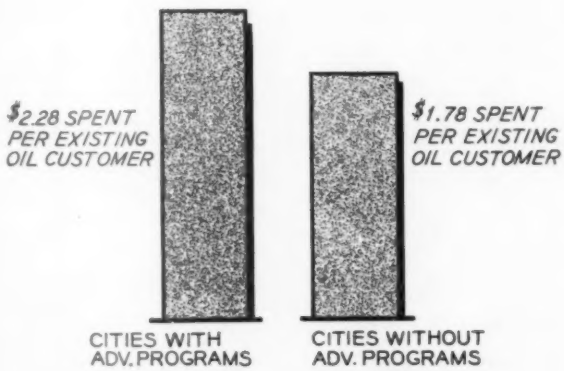
THE CAMPAIGNS ARE HELPING

LOSSES TO OTHER FUELS, 1958-59 SEASON —
OILHEATING DISPLACED BY GAS OR ELECTRICITY



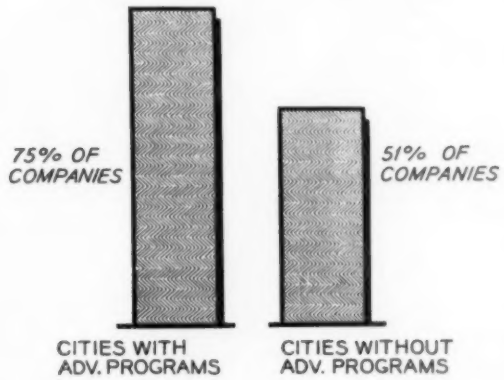
THE CAMPAIGNS ARE HELPING

COOPERATIVE PROGRAMS STIMULATE
INDIVIDUAL COMPANY ADVERTISING-
1958-59 SEASON


$2.28 SPENT PER EXISTING OIL CUSTOMER
$1.78 SPENT PER EXISTING OIL CUSTOMER
CITIES WITH ADV. PROGRAMS
CITIES WITHOUT ADV. PROGRAMS

THE CAMPAIGNS ARE HELPING

FUELOIL DISTRIBUTORS
THAT SAY
THEIR MARGINS ARE ADEQUATE



Range Oil Sales by Grades and States

(Thousands of 42-gallon barrels)

	Kerosene	No. 1 Fuel	Total 1958	Total 1957
NEW ENGLAND STATES				
Mass.	8,040	1,109	9,149	9,532
Conn.	3,663	96	3,759	3,837
R. I.	2,269	42	2,311	2,301
Maine	3,025	439	3,464	3,105
N. H.	1,505	193	1,698	1,316
Vt.	1,059	55	1,114	600
	19,561	1,934	21,495	20,691
MID-ATLANTIC STATES				
N. Y.	6,216	133	6,349	7,637
N. J.	3,575	189	3,764	3,815
Pa.	3,684	63	3,747	2,557
Md.	3,281	11	3,292	1,512
Del.	953	4	957	641
D. C.	225	1	226	161
	17,934	401	18,335	16,323
MIDWESTERN STATES				
Illinois	4,437	2,412	6,849	5,789
Mich.	3,735	2,292	6,027	5,334
Wisc.	1,787	1,693	3,480	2,858
Ind.	2,729	1,208	3,937	2,648
Minn.	1,516	1,238	2,754	2,400
Mo.	1,110	466	1,576	2,202
Iowa	1,648	537	2,185	2,149
Ohio	1,209	186	1,395	1,917
Nebr.	438	59	497	675
S. D.	590	139	729	544
Kan.	888	13	901	919
N. D.	578	85	663	797
	20,665	10,328	30,993	28,232
WESTERN STATES				
Colo.	148	87	235	299
Mont.	132	14	146	284
N. M.	149	19	168	171
Calif.	128	..	128	51
Idaho	15	94	109	107
Wyo.	38	2	40	63
Utah	4	19	23	78
Ore.	2	..	2	1
Wash.	5	..	5	..
Ariz.	1	..	1	..
Nev.	..	..	..	..
	622	235	857	1,054
SOUTHERN STATES				
N. C.	12,310	250	12,560	9,118
Tex.	669	7	676	1,408
S. C.	4,144	25	4,169	3,823
Ga.	2,217	40	2,257	1,860
Va.	4,412	94	4,506	2,485
Fla.	3,658	61	3,719	1,964
Tenn.	917	3	920	1,470
Ark.	116	14	130	613
Okla.	157	8	165	496
La.	82	3	85	538
Ala.	593	3	596	645
Ky.	828	111	939	1,144
Miss.	219	..	219	488
W. Va.	188	..	188	130
	30,510	619	31,129	26,182
TOTAL UNITED STATES				
Total	89,292	13,517	102,809	92,482

Heating oil sales Report for 1958 shows 11% Increase for Distillate

TABULATIONS of heating oil sales contained in Mineral Market Report, No. MMS 2971, indicate a gain of 11% during 1958 for distillate.

Total domestic sales of distillate fueloil and kerosene each increased 6% and residual fueloil sales decreased 2% in 1958, according to the survey made by the Bureau of Mines, United States Department of the Interior.

In general, heating oil use increased and industrial, railroad and bunker uses decreased. The over-all weather in 1958 was colder than normal, whereas 1957 had been warmer than normal. Industrial activity as measured by the Federal Reserve Board Index was down 6% for the year.

Distillate Fueloil

Sales of distillate fueloil in 1958 totaled 653,559 thousand barrels. Heating oils, the largest end-use category (61% of the total distillate) showed a gain of 11% for the year. Increases in distillate sales were reported for miscellaneous uses, 25% and military, 5%. Diesel and other light fueloils sold to railroads decreased 5%. Other decreases were No. 1 range oil, 20%; industrial, 14%; oil-company use, 25%. Vessel bunkering (including tankers) decreased 8%.

Residual Fueloil

Sales of residual fueloil totaled 531,367 thousand barrels in 1958. Industrial sales (29% of the total residual) decreased 6%; vessel bunker sales dropped 14% in 1958. Other decreases were oil-company use, 7%; railroads, 17%; miscellaneous uses, 3%.

Heating oil, which accounted for 18% of the total residual, showed a gain of 14% and military sales a gain of 29% in 1958. Sales of residual fuels to gas and electric public-utility power plants, accounting for 14% of total residual sales, remained unchanged.

Kerosene

Kerosene sales in 1958 totaled 108,458 thousand barrels. Sales of kerosene used as range oil were 18% higher in 1958 than in 1957, while the use of kerosene for tractor fuel declined 35% and other uses declined 28%.

It should be noted that the basis for reporting heating oil sales in 1958 is not the same as that used for the 1957 report. The figures shown for the two years are not directly comparable. The Bureau of Mines feels that the new basis is an improvement, representing as it does a revision of procedures to reflect more valid data for the current year.

The report, "Sales of Fueloil and Kerosene in 1958," was prepared by W. G. Messner, Branch of Petroleum Economics, Washington, D. C. Statistics for Arizona, California, Nevada, Oregon and Washington were compiled by Frank A. Moore, Division of Mineral Resources, San Francisco, Calif.

Fueloil Sales 1954-1958 by Uses

(In millions of 42-gallon barrels)

DISTILLATE 1954	1955	1956	1957	1958		RESIDUAL 1954	1955	1956	1957	1958
304	339	360	360	399	Heating	79	86	88	81	93
15	17	17	17	14	No. 1 sold as range	..	..	..	..	..
77	85	90	88	84	Railroads	16	15	11	7	6
16	17	19	20	19	Vessels	109	115	117	124	106
6	6	5	5	5	Utilities	71	76	74	77	76
42	44	45	44	38	Industrial	160	173	178	167	156
8	8	10	10	8	Oil Company Fuel	52	53	53	50	47
9	11	11	13	13	Armed Forces	27	28	31	29	37
49	54	59	60	74	All other uses	7	10	10	10	10
526	581	616	617	654	Total United States	521	556	562	545	531
24	25	34	48	19	Exports	27	34	28	39	26
550	606	650	665	673	Grand Total	548	590	590	584	557

Heating Oil Sales
by Grades and States
U. S. Bureau of Mines

(Thousands of 42-gallon barrels)

				Total Distillate		Districts			Total Residual		Grand Total	
No. 1	No. 2	No. 3	No. 4	1958	1957	1 NEW ENGLAND	No. 5	No. 6	1958	1957	1958	1957
353	4,283	..	6	4,642	4,998	Maine	575	820	1,395	522	6,037	5,520
96	3,437	..	..	3,533	4,648	New Hampshire	102	81	183	229	3,716	4,877
33	2,351	..	23	2,407	1,507	Vermont	8	124	132	133	2,539	1,640
1,218	41,723	110	178	43,229	32,021	Massachusetts	2,929	5,964	8,893	8,064	52,122	40,085
190	6,309	..	6	6,505	4,658	Rhode Island	481	1,146	1,627	2,363	8,132	7,021
552	18,767	273	2,040	21,632	15,354	Connecticut	277	3,950	4,227	4,040	25,859	19,394
2,442	76,870	383	2,253	81,948	63,186		4,372	12,085	16,457	15,351	98,405	78,537
No. 1	No. 2	No. 3	No. 4	1958	1957	2 MID-ATLANTIC	No. 5	No. 6	1958	1957	1958	1957
632	62,518	146	5,438	68,734	55,578	New York	915	16,829	17,744	16,064	86,478	71,642
341	30,061	57	3,171	33,630	30,749	New Jersey	479	5,649	6,128	5,883	39,758	36,632
1,267	29,767	16	281	31,331	29,633	Pennsylvania	3,519	2,989	6,508	4,171	37,839	33,804
28	1,978	..	..	2,006	2,567	Delaware	266	575	841	405	2,847	2,972
385	11,452	184	170	12,191	14,268	Maryland	1,029	2,063	3,092	2,457	15,283	16,725
48	2,429	145	319	2,941	3,373	Dist. of Columbia	367	1,397	1,764	1,613	4,705	4,986
2,701	138,205	548	9,379	150,833	136,168		6,575	29,502	36,077	30,593	186,910	166,761
No. 1	No. 2	No. 3	No. 4	1958	1957	3 MIDWEST	No. 5	No. 6	1958	1957	1958	1957
4,751	15,564	255	143	20,713	19,333	Michigan	1,397	1,903	3,300	2,596	24,013	21,929
3,452	7,719	35	338	11,544	9,658	Ohio	532	557	1,089	1,008	12,633	10,666
2,929	9,868	1,315	26	14,138	9,732	Indiana	894	713	1,607	1,519	15,745	11,251
3,567	23,560	1,055	34	28,216	20,597	Illinois	4,885	5,072	9,957	6,889	38,173	27,486
2,098	11,085	201	79	13,463	12,330	Wisconsin	1,180	515	1,695	943	15,158	13,273
2,229	7,307	228	51	9,815	12,973	Minnesota	1,061	496	1,557	1,530	11,372	14,503
2,067	4,108	125	31	6,331	7,455	Iowa	344	154	498	656	6,829	8,111
1,950	5,637	494	20	8,101	5,715	Missouri	2,631	532	3,163	2,307	11,264	8,022
277	369	26	7	679	1,629	Kansas	276	95	371	624	1,050	2,253
697	1,342	129	8	2,176	2,969	Nebraska	42	29	71	224	2,247	3,193
481	911	93	..	1,485	2,008	South Dakota	9	78	87	102	1,572	2,110
299	1,109	14	..	1,422	2,016	North Dakota	151	3	154	118	1,576	2,134
24,797	88,579	3,970	737	118,083	106,415		13,402	10,147	23,549	18,516	141,632	124,931
No. 1	No. 2	No. 3	No. 4	1958	1957	4 WESTERN	No. 5	No. 6	1958	1957	1958	1957
4,007	..	6,706	..	10,713	12,407	Washington	2,110	1,386	3,496	3,565	14,209	15,972
1,611	..	3,426	..	5,037	5,824	Oregon	1,091	585	1,676	1,847	6,713	7,671
1,003	..	2,105	..	3,108	3,486	California	1,617	1,787	3,404	4,380	6,512	7,866
389	96	48	44	577	998	Montana	101	31	132	192	709	1,190
948	521	563	30	2,062	1,984	Idaho	87	116	203	346	2,265	2,330
119	169	..	..	288	582	Wyoming	15	15	30	51	318	633
337	289	..	..	626	1,110	Colorado	4	211	215	364	841	1,474
290	458	58	72	878	1,165	Utah	156	28	184	352	1,062	1,517
129	..	326	..	455	495	Nevada	39	46	85	82	540	577
46	44	..	..	90	166	New Mexico	..	48	48	53	138	219
59	..	230	..	289	240	Arizona	1	7	8	2	297	242
8,937	1,577	13,462	146	24,123	28,457		5,221	4,260	9,481	11,234	33,604	39,691
No. 1	No. 2	No. 3	No. 4	1958	1957	5 SOUTHERN	No. 5	No. 6	1958	1957	1958	1957
471	5,644	271	103	6,489	8,391	Virginia	432	1,955	2,387	1,114	8,876	9,505
14	169	18	25	226	587	West Virginia	37	17	54	102	280	689
800	5,164	24	..	5,988	4,984	North Carolina	231	66	297	209	6,285	5,193
495	1,934	..	..	2,429	1,689	South Carolina	222	557	779	278	3,208	1,967
170	588	..	..	758	1,287	Georgia	163	267	430	400	1,188	1,687
96	1,578	..	14	1,688	2,386	Florida	83	881	964	1,070	2,652	3,456
508	716	..	5	1,229	1,329	Kentucky	51	19	70	88	1,299	1,417
63	641	..	..	704	842	Tennessee	..	8	8	181	712	1,023
51	298	..	..	349	708	Alabama	212	205	417	128	766	836
13	101	..	..	114	257	Mississippi	1	..	1	2	115	259
..	118	..	..	118	331	Arkansas	..	138	138	173	256	504
3	564	67	165	799	700	Louisiana	122	449	571	593	1,370	1,293
231	27	..	..	258	542	Oklahoma	119	22	141	131	399	673
824	2,184	..	9	3,017	1,953	Texas	165	1,132	1,297	1,249	4,314	3,202
3,739	19,726	380	321	24,166	25,986		1,838	5,716	7,554	5,718	31,720	31,704
No. 1	No. 2	No. 3	No. 4	1958	1957	TOTAL UNITED STATES	No. 5	No. 6	1958	1957	1958	1957
42,617	324,957	18,743	12,836	399,153		Total U. S. 1958	31,408	61,710	93,118		492,271	
50,193	276,631	25,285	8,103		360,212	Total U. S. 1957	28,704	52,708		81,412		441,624

OHI Directors explore Growth, Exposition at Seaview Meeting

THE REGULAR fall meeting of the Oil Heat Institute of America was held at the Seaview Country Club, Absecon, New Jersey, on September 20-22. Attending were some two dozen directors plus three dozen industry visitors and wives. Following two days of committee meetings, the board meeting was on the final day, with Fred Heaney, OHI president, and Ralph Becker, secretary-treasurer and managing director, in charge.

Becker first reported for the financial side, showing the Institute in adequate funds and an asset-liability favorable balance of $38,000.

Next Charles Burkhardt, secretary of the Distribution Division, stated that the net income of his group in the first five months of the fiscal year was 30% above that of the total previous year . . . that for this fiscal year will be about $30,000. The Treasury of Advertising, primarily mailing pieces and calendars sold to dealers, had gross sales in the first six months of $72,000 compared with $81,000 in the full prior year.

Membership Grows

The dealer membership, he pointed out, is over 4,400 and he predicted that it will exceed 5,000 during the fiscal year. The newest item in promotion materials sold by the Institute to dealers are printed super market sacks, glorifying oil heat as the lady carries out the groceries. Twelve million have been sold in a few months, with 30 million expected by the end of the year. Among others the Long Island OHI had taken 1,800,000 and the Oil Heat Council of N. J. three million. In addition to these, one large New York oil company has ordered 18 million at a cost of $41,000.

Next to report was Charles Pesterfield, secretary of the Commercial-Industrial Division. He first presented a list of new members for the Associates Chapter, these being engineers and installers of heavy oil equipment. He noted that Lawrence Sibley, chairman of the Division, will appoint a public relations committee.

In July, Pesterfield, as secretary of the Air Pollution Committee, was invited to Washington to discuss changing present Government buildings that now burn coal over to oil or gas. The agency responsible for all buildings is General Services Administration, usually abbreviated as GSA. Oilheated buildings for this agency now use annually 55 million gallons and will add another 25 million when the Capitol is oilheated next year. The additional buildings, now slated for oil or gas, should account for another 50 million if they go to oil. Naturally, the gas people are trying hard to get these.

Training Program

Pesterfield explained that if these go to oil, the industry is being asked to subsidize the training of some 400 individuals, all present Government employees, to operate the oil plants, starting with a unit of 100 right away. The training period would be three hours a week for a year or more.

He then told of other C-I Division activities, such as the development of a glossary of terms commonly used, and a Code of Ethics which has now been adopted.

The next to report was Robert Myers, of Mahool-Myers Agency, Baltimore, substituting for Frank Brophy, public relations chairman, who was ill. Myers displayed examples of 36 pieces of consumer literature that had been prepared by his agency for the Distribution Division. He noted that he is supplying publicity materials to a thousand newspapers in 35 states. He has in file some 6,400 clippings of news material provided to publications.

If this had been paid advertising space, he went on to say, it would have cost the Institute $350,000, whereas it was actually done on a PR budget of $12,000 a year. He told of his coverage of the Seattle convention in the spring, including releases to 60 hometown papers on individuals taking part or honored with awards. He complained of getting very little cooperation from the manufacturers in the group, whom he had often asked to supply him with newsworthy material.

R. S. Doherty, chairman of the Exposition Committee, told the group that space sales for the OHI Exposition in the first 20 days after release were 50.5% of the total available. This compares with 48% in the same period at the last show two years ago. The exposition is to be at New York's Coliseum in the week starting April 4, 1960. He asked for help from the Board in getting sales.

Charles Lang, chairman of the Manufacturers Division, told of his group's meeting the day before. A guest had been David Locklin of Battelle Memorial Institute, Columbus, which is doing research work for oilheating equipment through the American Petroleum Institute. Locklin had told informally of his objectives in this one-year study to explore avenues of possible help to the industry.

Lang also told of a brochure outlining the usefulness of OHI and its doings that had been presented to the manufacturers. This was an easel presentation that is to be revised somewhat and then put in booklet form. Lang also mentioned a report to the manufacturers on the scope of National Fueloil Council growth and activities, noting that the advertising investment through its local campaigns will exceed two million dollars in this year.

Water Heater Tax

Lang then brought up the tax matter, in which oilfired water heaters are being made subject to excise tax of 5%, retroactive on manufacturers for three years. He noted that George Gruberg, the Institute attorney, was following this closely in Washington. This is a case of discrimination between fuels.

For the Technical Division, M. J. Reed, chairman, told of the work of several committees in the Division. The one on Combustion Test Procedures has reached the point of having smoke tests published by the American Society for Testing Materials,

(*Please turn to page* 127)

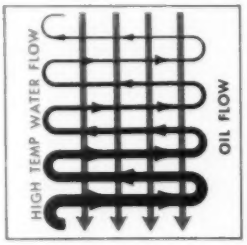
HOW TO USE high temperature water directly in a no. 6 oil heater–with no danger of system contamination!

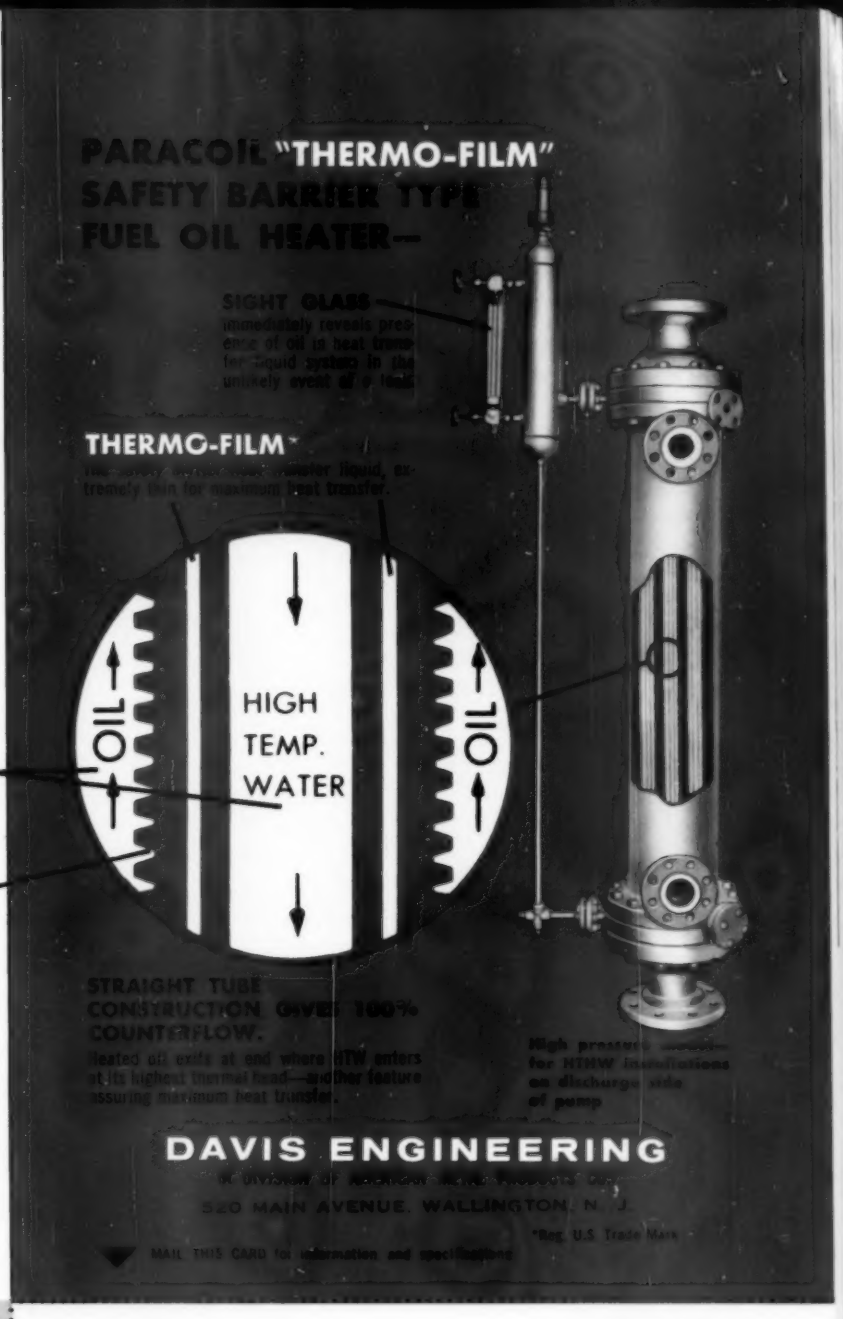
The unique Paracoil "Thermo-Film" heater permits *direct use of HTW in the same heater shell with the fuel oil.* The "Thermo-Film" design provides all necessary circuit isolation. This means smaller space requirements, simpler operation and lower installation costs than alternate methods using intermediate exchangers with inter-connecting piping, regulators, level controls, etc.

COMPLETE ISOLATION of HTW and fuel oil is accomplished by a coaxial tube assembly, with heat-transfer liquid separating inner and outer tubes. *Boiler contamination in the event of oil tube failure is impossible.*

EXTENDED SURFACE of outer tubes substantially reduces size and weight of heater.

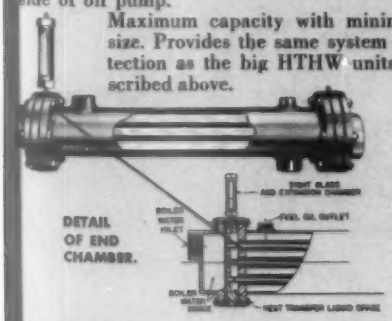
INTERNAL TURBULENCE — with oil baffled back and forth across heating tubes — increases heat transfer rates and reduces bulk of the heater.





ALSO—LOW PRESSURE MODELS
Compact units using low pressure boiler water, for installation on suction or discharge side of oil pump.

Maximum capacity with minimum size. Provides the same system protection as the big HTHW units described above.



TURN PAGE FOR ADDITIONAL DESIGNS OF PARACOIL FUEL OIL HEATERS — YOU MAY HAVE BEEN LOOKING FOR ONE OF THEM!

Postage Will be Paid by Addressee

No Postage Stamp Necessary If Mailed in the United States

BUSINESS REPLY CARD
First Class Permit No. 459, Passaic, N. J.

DAVIS ENGINEERING
(A Division of American Metal Products Company)
520 MAIN AVENUE.
WALLINGTON, N. J.

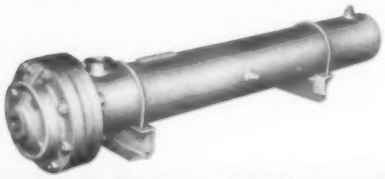
which of these fuel oil heating problems can Paracoil help you solve?

UNDERGROUND STORAGE

INTERMITTENT PLANT OPERATION

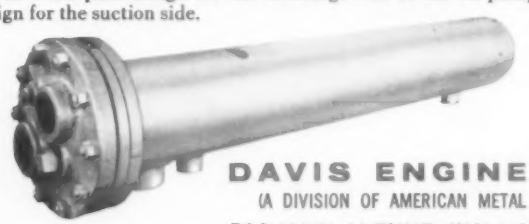
HIGH CAPACITY OUTPUT IN LIMITED SPACE

This famous Paracoil Tubular Fuel Oil heater, using steam as the heating medium, provides remarkably high heat transfer rates. Space requirements and weights are at a minimum.



SUB-WATER LINE OR STEAM SYSTEMS

The Paracoil U-Tube type Fuel Oil Heater has been a standard of the fuel oil heating industry for years, can be used for sub-water line or with steam. Features a 6-pass design for the discharge side of the oil pump—a 2-pass design for the suction side.



DAVIS ENGINEERING
(A DIVISION OF AMERICAN METAL PRODUCTS CO.)
520 MAIN AVENUE, WALLINGTON, N. J

PUMPING VISCOUS NO. 6 OIL FROM STORAGE TANKS

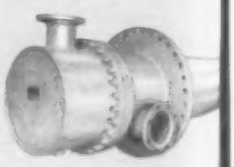
Tank suction heaters are used to lower the viscosity of No. 6 fuel oil before it enters your circulation system. Reduces strain on the pumps. For economy of operation, only the oil being withdrawn is heated—not the entire tank contents.

Tank Suction Bell Heaters

For small-to-moderate demand installations. Easily inserted through standard 16″ tank manhole. Available in two sizes, 6 sq. ft. and 12 sq. ft. heating surface.

Horizontal Tank Suction Heaters

For higher capacity installations. Various designs to suit your own application. Model shown carries flange at inlet end for seal-off valve permitting removal of tube bundle from a full tank.



MAIL THIS CARD for information and specifications on any heater shown on this page

DAVIS ENGINEERING FOH
(A DIVISION OF AMERICAN METAL PRODUCTS CO.)

Please send me information and specifications on the following fuel oil heaters:

- ☐ THERMO-FILM HEATERS (see reverse side of this page)
  - ☐ High pressure model
  - ☐ Low pressure model
- ☐ Tank Suction Heaters
- ☐ Tubular Fuel Oil Heaters
- ☐ Type GF Indirect Gas Fired Heater
- ☐ U-Tube Fuel Oil Heaters

My application is_____

Name_____

Title_____ **Dept.**_____

Company_____

Address_____

City_____ **State**_____

Modern Oilheating for Schools

Part 2—Electricity is too high priced for heating schools; oil heat advocates should become experts at proving this

by Jean L. Dupuis

ELECTRIC HEAT is so high-priced that considering using it in a school is absurd and fantastic.

Proving that statement is easy.

With No. 6 fueloil priced at 7¢ per gallon, it provides 21,714 Btu's for each cent spent on the fuel.

With electricity priced at 1½¢ per kwhr, it provides 2,275 Btu's for each cent spent on it.

How is it, then, that with the cost figures not much different than just cited, those planning certain, new schools have decided to heat them electrically?

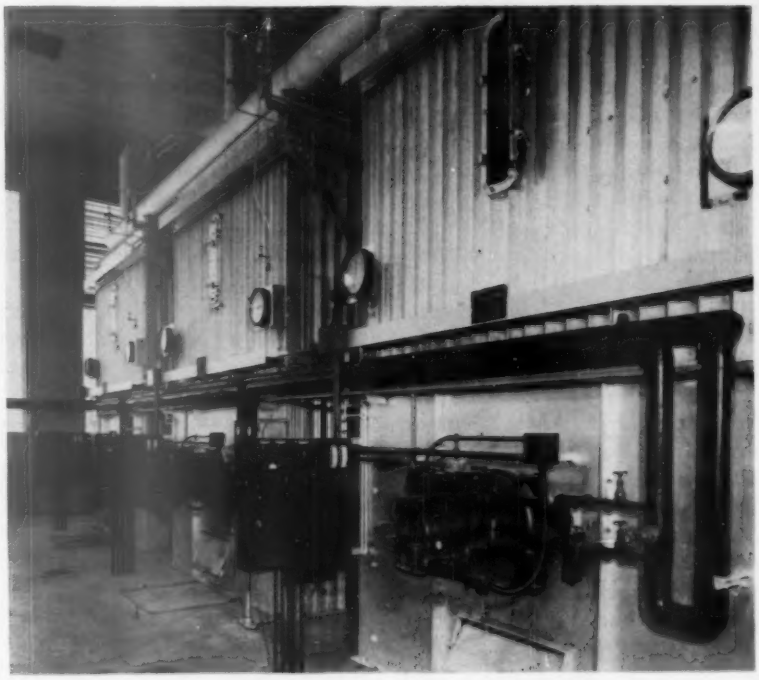
The fact is that electric heat has been selected for new schools in cases where the Btu's obtained in buying electricity cost six to nine times as much as the Btu's obtained in buying fueloil.

Also, and amazingly, at the present time the electric heat industry can boast that throughout this country about 200 schools are being heated by electricity, and that electric heat is being considered for many, many more schools now in the planning stage.

How can this be, with electricity so high priced that to consider using it to heat a school is absurd and fantastic?

The answer to these questions lies in the fact that, where electric heat has been selected for new schools although heatwise it costs six to nine times what oil heat costs, those fighting for the cause of electric heat have done much plain and fancy jiggling of figures—both school construction cost figures, and figures showing alleged yearly costs of oil heat and electric heat.

In typical instances, electric heat for schools is being offered by men who are experts at preparing cost figures. The figures which these men prepare indicate that the construction costs of a new school are far lower with electric



Commercial & Industrial Oilburning Section

fueloil & oilheat

FOR CLOSER TEMPERATURE CONTROL

Specify GENERAL

Type HMT AUTOMATIC ELECTRIC FUEL OIL PREHEATERS

When highest performance and product quality are required, the rugged design simplicity of Type HMT units is outstanding.

★ Offered in an extremely wide range (5 to 36 KW) of models.

★ High voltage range and choice of watt densities available.

★ 3" ASA mounting flanges are rated at 150 or 300 pounds for speedier installation and interchangeability.

★ For complete details, request bulletin offered below.

REQUEST CATALOG EH-100

— covering our complete line of electric Fuel Oil Preheating units (750 to 60,000 watts). Write Hayden Heater Division, General Fittings Company.

GENERAL FITTINGS COMPANY

EAST GREENWICH, R. I.

COMMERCIAL & INDUSTRIAL oilburning

neat than with oil heat, and that the yearly heating costs of electric heat are not overly high

In view of the fact that to start with these electric-heat men have little to work with, where on a Btu basis electricity costs six to nine times more than fueloil costs, it must be conceded that these men are exceedingly good at jiggling the cost figures.

Electric heat would not be considered at all by the executives in charge of planning these new schools, if the cost figures prepared and displayed by electric-heat men were not stacked, tilted, and weighted heavily in favor of this form of heat. Straightening out these figures is work for oil-heat men, but in some actual instances of the past there was a lack of effort in this direction on the part of the oil-heat men.

In these instances, the electric-heat interests went to work on a particular school project without sparing effort or expense. They did literally everything that could be done to convince all the interested executives that the new school should be heated electrically.

They prepared figures of their own, showing their version of the construction cost and yearly heating cost of the new school—heated by fueloil.

To oppose these figures, which can be considered a stooge set up by the electric heating interests so that a moment later it could be knocked down by the same interests, they prepared figures to prove how advantageously the school could be heated electrically.

In one of these instances, the entire construction of the school had to be changed, the electric-heat men pointed out, to make it suitable for electric heat. Planning all the changes, and allotting cost figures to them, gave the electric-heat men their opportunities to tilt the entire situation in favor of their form of heat.

Their version of an oilheated school, which they described and gave complete cost figures for, was drab and uninviting—not a school about which a school board, and architects and engineers, could look forward to having a hand in building.

Their version of an electrically-heated school was fascinating throughout. Dozens and dozens of lines of cost figures, all prepared carefully to favor the electric heat idea, proved the electrically heated school relatively inexpensive in first cost.

In the instances I am referring to, the electric-heat men had things all their own way, as they convinced the local school authorities that the schools should be built to be heated electrically.

Only the electric-heat versions of cost figures, school construction costs and yearly heating costs, were studied by the men who decided on electric heat for these schools. Local fueloil dealers and oilburner men were aware of the situation, but could do little more than wring their hands. Not having the ability of heating engineers, architects, and fuel utilization engineers, they could not even comment on the impressive sheets of cost figures prepared by the experts at electric heating.

Experts needed

The local men in favor of oil heat for the new school could not engage the electric-heat experts in battle—any more than a law school graduate, starting practicing in a small town, could stand up to Clarence Darrow.

That's why new schools are heated electrically in these instances—the electric-heat interests had things all their own way in presenting their arguments; nobody representing the oil-heat industry, and capable of putting on a good show before a school board and its architect, was on the scene to fight electric heat.

Those in favor of oil heat for new schools should become experts at proving that electric heat is too high priced for heating schools.

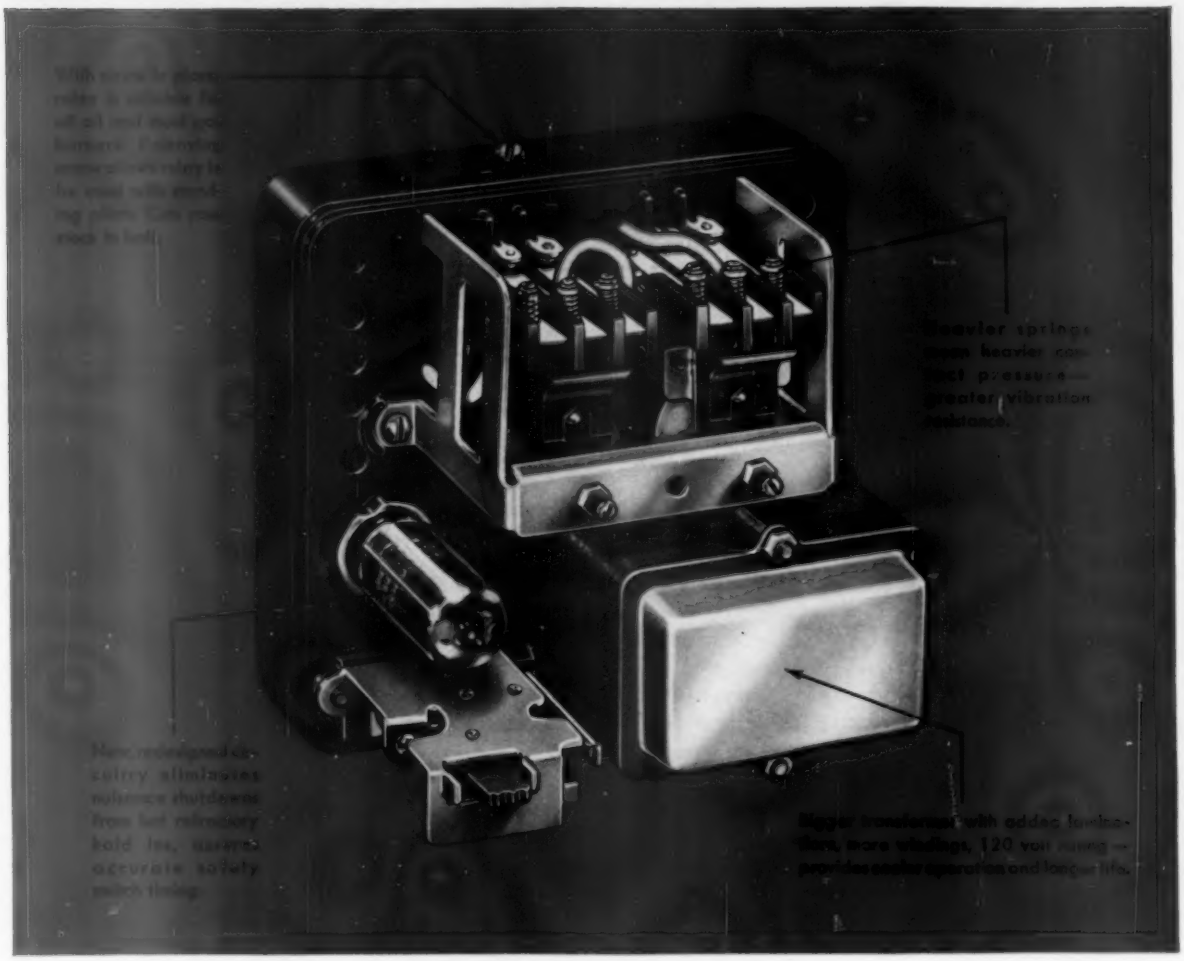
Certain facts pertinent to school heating need stating, and re-stating and re-stating

For example, one kilowatt-hour of electricity gives out, when used in electric resistance heaters, only 3,413

NOW! The Serviceman's Relay . . .

The RA890E

Honeywell's Newly Improved Electronic Flame Safeguard



Before designing this new Relay . . . Honeywell went directly to the servicemen in the field . . . to gather facts and find out what improvements were needed. This new Flame Safeguard incorporates improvements based on this field knowledge. You'll find it worthy of its name: "the servicemen's relay". For further information, call your nearest Honeywell office, or write: Minneapolis-Honeywell, Dept. FH-10-100, Minneapolis 8, Minnesota.

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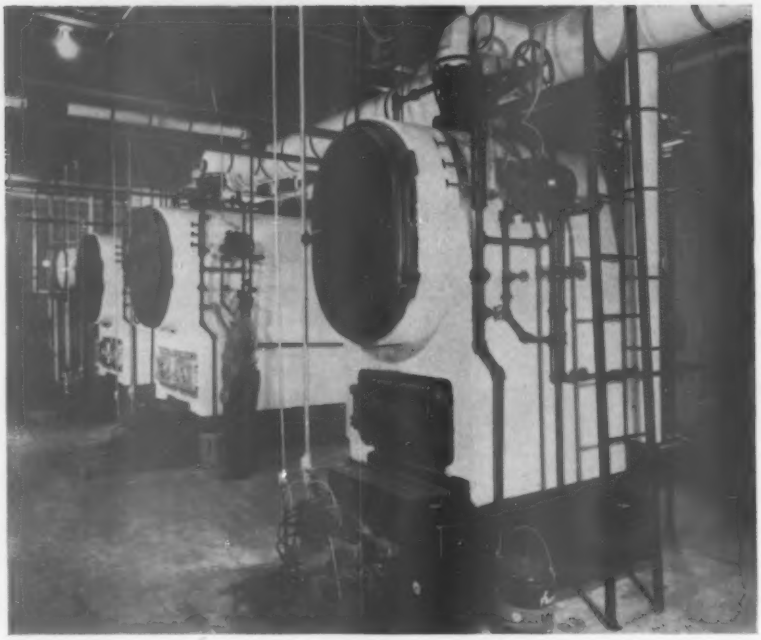
H HONEYWELL *First in Control*

fuel oil & oilheat



Btu's. That "Btu" stands for British thermal unit, which represents the amount of heat needed to raise the temperature of one pound of water by one degree Fahrenheit.

One kilowatt-hour (abbreviated kwhr), or one thousand watts for one hour, provides only 3,413 Btu's.

Not easy to ascertain but of utmost importance is the cost to the school of the kwhr used for heating. Dividing this cost into 3,413 gives the number of Btu's obtained for heating, for each cent spent on electricity.

Where electricity used for heating costs 1½¢ per kwhr, for example, the school pays one cent for each 2,275 Btu's used for heating.

No. 6 fueloil contains 152,000 Btu's per gallon. Where a gallon of it costs 7¢, this grade of fueloil provides 21,714 Btu's for each one cent spent on the oil.

Insulation requirements

The facts about a proposed, new school costing $1,000,000 may run something like this. Heated by electricity, the school will need vast amounts of thermal insulation for its outside walls and its top-floor ceiling. Above the top-floor ceiling, for example, should be insulation fully six inches thick! Double-glazed windows will be needed throughout. Heated electrically, the school will not need a boiler room, or boilers, oilburners, an oil storage tank, etc.

Heated by oil, the school will need a boiler room and a complete heating system. It may cost, therefore, $30,000 more than if it were heated by electricity and insulated as described.

The "fuel bill" for heating the school electrically may amount to $18,000 yearly. The yearly cost of fueloil may amount to $5,000, and other yearly expenses of the oilburners and boiler room may amount to an additional $1,000.

With the oil-heat costs $6,000 yearly, and the electric-heat costs $18,000 yearly, the savings resulting from the use of oil heat is $12,000 yearly—a handsome yearly return on the $30,000 spent initially for an oilfired heating system.

The preceding is a pattern that may roughly fit certain schools. For a particular school, figures should be prepared—by oil-heat men as well as by electric-heat men—which match the details of the school, and the electricity rates and the oil prices Oil-heat experts should be on hand, ready and able to put on a top-notch show, when the men planning a new school are buckling down to deciding which type of heat and which kind of fuel to use.

The experts fighting on the side of oil heat, at school planning sessions, should know all there is to know about oil heat versus electric heat. In many instances, the greatest argument that can be presented for oil heat is its low cost compared to the cost of electric heat.

Oil heat has many advantages compared to electric heat. Just as examples of these, the oilheating plant in a given new school may have five times the Btu capacity of an electric-heat plant that may be offered for the same school, and one dollar spent on oilheated hot water may provide five times as much hot water as one dollar spent on electrically heated hot water. Room temperatures can be raised speedily mornings in oilheated schools, but only creep up in electrically heated schools. Fueloil is purchased from any of many companies, in strong competition with each other, but electricity can be obtained only from a local utility, which has much to say regarding its charges for a kwhr, and which may charge higher rates in the future for any of a number of reasons.

The electric-heat engineer has a great worry about demand charges; were he to arrange to have the entire electric heating system in a school go to work when the school needs fast heating up on a cold morning, following a temperature set-back during unoccupied hours to save the expensive electricity, he would use such a vast rate of electricity during warm-up that he would increase the price the school must pay for each kwhr it uses for heating. You can't afford, then, to heat up an electricially heated school quickly. Using low-cost oil heat, you have no such worry.

Oil heat thus has many advantages over electric heat. However, the one vast advantage for a particular new school may be the low cost of oil heat—where the Btu's obtained in buying the electricity cost six to nine times as much as the Btu's obtained in buying fueloil.

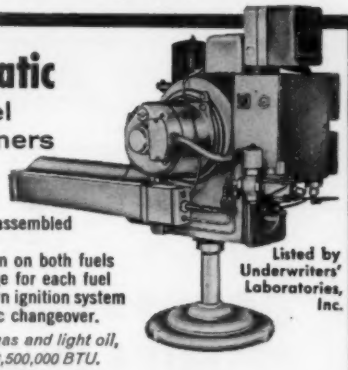
Yes, when you have a burner application, consult the POWER FLAME Catalogue FIRST. You'll discover a complete range of POWER FLAME models and sizes in light oil and gas combination gun-type burners. This flexibility fits your requirements to a T and saves countless hours of catalogue searching. Every POWER FLAME burner has been "torture tested" for maximum efficiency and dependability. You profit from low-cost installation and maintenance, too!

Combi-matic
Dual Fuel
Gas-Oil Burners

With these outstanding features:

- Completely factory assembled and wired
- Balanced combustion on both fuels
- Automatic air change for each fuel
- Each fuel has its own ignition system
- Manual or automatic changeover.

FGO *Six models for gas and light oil, in capacities to 3,500,000 BTU.*



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Combi-matic®
Dual Fuel
Gas-Gas
Burners

BFGG—For all gasses and Liquefied Petroleum. A complete line from 450,000 to 20,000,000 BTU. The BFGG Series incorporates many of the product features of the famous FGO Series.

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properly prepare
heavy oil for combustion

use
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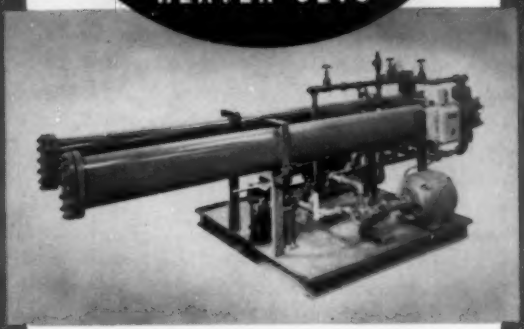
HEATER SETS



Use the most efficient and up-to-date means for the proper preparation of heavy oil for combustion—an EAGAN "pre-packaged" fuel oil pump and heater set. These are the benefits you'll get:

- *speedy installation* since an EAGAN unit is delivered ready to operate. Only connections to oil and steam supply, burner, bypass and relief valve are required.
- *elimination of combustion difficulties* caused by improper field assembled combinations.
- *reserve capacity.* EAGAN units exceed minimum requirements of the burner with an adequate safety factor to provide for eventual wear and future demand increases.
- *easy maintenance* since all parts are located for easy access.
- *long life* because of special engineering, sturdy construction.

EAGAN fuel oil pump and heater sets heat to 300°F, pump to 400 psi and have capacities to 3000 gph. Single or duplex units are available for steam or electric drive. Duplex "electro-steam" sets provide for electrical failure by incorporating one steam pump and one electric motor driven pump. Other EAGAN fuel oil pump and heater sets can be made to your special requirements.

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Readers' Problems

Q. I read conflicting instructions on how often low-water controls of steam heating boilers should be blown down on installations larger than domestic size. Before me are printed instructions. One says test these controls once a day, a second says once a week, and a third says once every two weeks. Ideas on this from you will be appreciated. Also, what's the difference between blowing down these low-water controls, and testing them?

D. N. C., Newark, N. J.

A. How often a low-water control of a steam boiler should be given attention depends on the nature and size of the boiler. In a boiler room which has a battery of several 200 hp or 300 hp heating boilers attended by a full-time superintendent, for example, undoubtedly the instructions should be to tend to the low-water controls once-a-day during the heating season.

At the other extreme are steam boilers resembling those on domestic installations, but somewhat larger and fired at from 5.0 to 10 gph to heat small commercial buildings, small apartment houses, etc. For these, once-a-week attention usually is enough. If conditions are excellent, for example the water puts little lime and scale into boilers, and the quality and condition of all the boiler-room equipment are exceptionally good, this may be stretched to attention to the low-water controls every two weeks.

A more important problem lies in making certain your low-water controls receive attention as often as you decide they should.

Testing these controls and blowing them down becomes the same thing, if you follow this procedure. With an oilburner running, open wide the blow-down valve of the float chamber; keep it wide open until the water pouring out runs fairly clear. You make certain that the burner stops firing a few seconds after you open the blow-down valve; that tests the action of the low-water control. Keeping the valve open long enough for clear water to come from it does a good job of blowing down the float chamber.

COMMERCIAL & INDUSTRIAL oilburning

Q. Is there standard terminology for pieces of equipment that go at the bottoms of suction lines and return lines on automatic installations which use No. 6 oil? I mean jobs on which return lines, as well as suction lines, extend down nearly to the bottoms of the fueloil storage tanks. In describing what I would install for a newly sold job, I said I'd have a "suction bell" in which the suction line

Phantom view of JOHNSON Model 53 equipped with 3-Pass Swivel Ell for #6 Oil

Positive Starting!
Better Performance!
Lower Fuel Costs!

JOHNSON MODEL 53
METERING PUMP BURNERS

With this revolutionary new burner you get smooth, sure, automatic "Starts" even when the oil in storage tank and lines is cold and hard to pump. It is built with a positive displacement Metering Pump, a 3-Way Magnetic Oil Valve, and a high efficiency Suction Pump that enable the Fifty-Three to maintain a fixed air-fuel-ratio regardless of variations in oil temperature and viscosity. Never before has there been a burner which so successfully overcomes the "Cold Starts" problem.

The Fifty-Three is built in 8 sizes from 28HP to 560HP. It is available with Direct Drive or Belt Drive. Combination Oil and Gas models also are available. All models are fully automatic and equipped with finest electronic controls. For efficiency, easy servicing and all around economy, the Fifty-Three is the best oil burner buy on the market.

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Builders of fine Oil Burner Equipment since 1903

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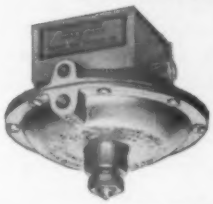

"D" Series Switch shuts off fuel if drop in fluid or gas pressure occurs.

"114" Series Switch shuts off fuel if blower fails.

Thousands sold. Factory Mutual and Underwriters Laboratories Approved. Standard equipment on leading products. Write for prices and literature.

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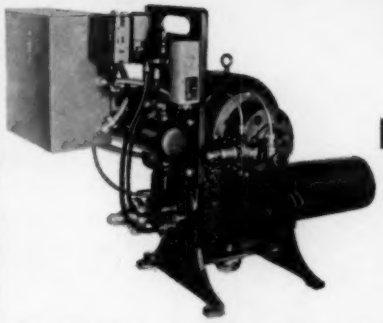
PROTECTION FOR: Oil Burners—Industrial Ovens and Boilers—Power Gas Burners

No. 4 OIL BURNER by ELECTROL *fully automatic*



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- No moving arms and rods, special pumps, or heaters.
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- Hot oil at nozzle on every burner start.
- Standard stock items—heater, controls, valves, nozzles, pump, etc.
- Three models, 2 to 20 gph.

and . . . the finest and most complete line of #2 oil burning equipment including warm air furnaces, boilers and water heaters, from .75 to 24 gph.

Write for "HO, No. 4 Burner" literature, or on any oil burner problem.

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RUTHERFORD, NEW JERSEY

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THE COMMERCIAL INDUSTRIAL OILBURNING BOOK

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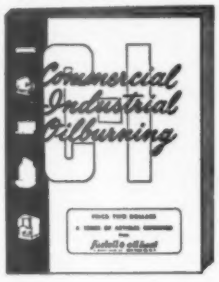

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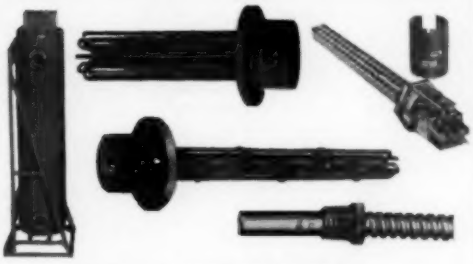
HEAVY FUEL OIL APPLICATION



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- AUTOMATIC RETURN LINE HEATERS
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- CIRCULATION HEATERS
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- VULCAN "MINIWATT" HEATERS

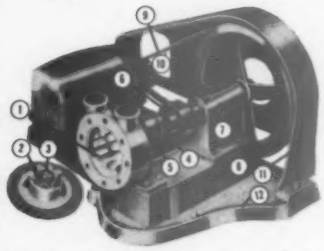
Write for new fuel oil heater catalog V.O. 59.

VULCAN *VERSATILITY IN* ELECTRIC HEATING

Vulcan Electric Company, Danvers, Mass.

KRAISSL PUMPS

CLASS 60 REDUCTION UNITS for rotary burners



These pumps have been in service for many years for direct supply or booster pumping of heavy oil. Slow speed operation reduces cavitation. Outboard ball bearing unit increases pump life by isolation of pulley load. Capacities 130-2700 GPH; pressures to 100 psig.

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1. Internal gear design provides high suction lift characteristics.
2. Hardened idler insures minimum wear.
3. Cap screw closure with steering permits easy access to pump interior.
4. Adjustable stuffing box fitted with return seal and soft packing keeps shaft wear and chance of leakage to a minimum.
5. Interchangeable return seal design allows change of rotation in field.
6. Flexible coupling isolates pump bearings from pulley loads.
7. Rugged ball bearing unit insures bearing alignment and large grease reservoir with provision for relubrication minimizes maintenance.
8. Bearing unit support cast integral with bed plate reduces vulnerability to distortion.
9. Adjustable V-belt drive absorbs shock loads and provides quiet operation with low replacement cost.
10. Varied pulley combinations for proper viscosity — speed relationship.
11. Cast iron belt guard protects personnel from exposed moving parts and eliminates chance of bending, denting or sharp edges.
12. Cast iron bed plate with drip collecting bead around edge insures rigid support and minimum chance of bed plate bending or distortion.

Write for Bulletin A-1193

Protect your fuel oil pumps with Kraissl strainers.

Write for Bulletin A-1430.

KRAISSL CO. Inc.

295 Williams Ave., Hackensack, N. J.

COMMERCIAL & INDUSTRIAL oilburning

and return line would terminate in the bottom of the storage tank. Both lines are 2" size. The owner of the job now says this indicates this "suction bell" should have in it a set of coils containing either steam or circulated, hot water to provide heat for the fuel-oil entering the suction line during a start-up with the steam boiler cold. Intending to equip it with such heating coils, I've always termed such a thing a "hot well." The adjective "hot," in this term I've used, I thought indicated clearly that heat would be put into it by circulated, hot water, or by steam, to make it a "hot well." The arrangement would not be really hot, I reasoned, unless somehow I put real heat into it.

G. F. S., Plainfield, Indiana

A. This is entirely a matter of proper interpretation of your words, as no standard terminology solves your problem. However, any system of using steam coils or hot-water coils in the bottom of an oil storage tank is so complicated and costly that the system is described in detail, where the intention is to install such a system. If you say you plan to install a "suction bell," a "tank bell," or even a "hot well," in which the suction line and return line are to terminate in the bottom of a tank, most men don't gather the idea that you mean to equip this device with coils heated by steam or circulated hot-water. If you do not describe a costly arrangement in detail, and say definitely that you will install it, then you are not obliged to install it. Instead of installing a heating coil, you could install an electrical arrangement to heat the fueloil entering the suction line opening, in the bottom of the oil tank, during a start-up with the boiler cold. That you don't install, either, without specifically saying so in your descriptive of your installation.

Q. In years of servicing rotary burners using the heavy oils, I never ran into this before. Seeing a 15" reading on the vacuum gage at the outlet of a strainer in the suction line, of this 25 gph burner using No. 6, I asked the building superintendent if his strainer basket was becoming loaded and needed cleaning. He answered that he could not run with the basket in the strainer. I asked him to prove that, and he certainly did. Putting the basket in the suction strainer raised the vacuum reading to above 20", and made the fire too small and skimpy to heat the building no matter how I tried adjusting the burner. This job has given more or less trouble since last fall, when No. 6 that's real heavy first was delivered to it. This oil comes through the suction line from the tank at 95°F., and comes out of the under-the-waterline oil heater on the side of the boiler, then goes to the burner's cup, at 110°F. What's the answer about running without the basket in the strainer in the suction line?

E. W. L., Manhattan, N. Y.

A. Your letterhead names a horizontal rotary-cup burner in which you seem to specialize. If the burner you write about is of this make, or is similar with respect to its fueloil preheating requirements, then the suction-line thermometer on the job should be giving a reading of about 120°F. (instead of the 95°F. reading), and the thermometer on the fueloil output line of the indirect oil heater should be giving a reading between 150°F. and 165°F. (instead of the 110°F. you report). Those are proper thermometer readings with the burner running normally, producing steam for radiators on a day that's fairly cold—outside temperature lower than 40°F.

This installation certainly needs a much larger indirect fueloil heater, if its present oil heater is working properly, is not plugged up with sediment and lime that restrict the flow of boiler water through it. Consider installing, along with the new, larger oil heater, a circulator to rush boiler water through the heater shell.

The return line of this burner should extend down to the bottom of the oil tank, and should terminate in a suction bell or tank bell that directs all of the hot, returned fueloil into the suction line.

(*Please turn to page 124*)

More of what it takes . . . that's what Mobilheat has! More customer satisfaction built into it! More progressive . . . and aggressive . . . selling power behind it! And for the final proof . . . more *customers!* If you want to build your business around the fuel oil that leads the field in every way, call your Mobilheat representative . . . and talk business!

Mobil

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"One man installs this

Says
George Bernard, Chief Engineer,
Sid Harvey, Inc.,
Oil Burner Supply Specialists,
Valley Stream, New York

Here's how easy it is to install a new Cerafelt combustion chamber inside the present worn refractory chamber:

9:00—Esso Standard Oil serviceman sees chamber needs replacement.

9:30—Complete unit in place and Cerafelt sticker put on burner wall.

New Johns-Manville Cerafelt kits let you install a better firebox . . . at less cost!

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Cerafelt combustion chamber *—in 30 minutes!"*

"J-M Cerafelt® installs faster and easier than brick with no cement, mess or clean-up. And this lightweight unit produces a better firebox, yet it costs us less to work with and lasts indefinitely.

"Working with a Cerafelt kit," continues Mr. Bernard, "one man can complete a combustion chamber installation in 30 minutes instead of the usual 5 hours. All he needs is a sharp knife, snips and screwdriver.

"Cerafelt fireboxes heat up in seconds, and cool off just as fast. They absorb burner noises and thus provide a quieter operating unit."

9:10—He measures and cuts stainless steel sleeve from roll supplied in kit.

9:20—Cerafelt bottom and liner are easily cut to fill sleeve.

9:25—Chamber is disassembled and put together inside burner.

With new Cerafelt combustion chamber kits, installation is fast, easy. The kit consists of Cerafelt refractory felt, stainless steel backing, screws and an instruction sheet.

Regardless of the shape of the old chamber, it's easy to completely assemble and install a new Cerafelt combustion chamber *in just 30 minutes!* And the new chamber will save the homeowner 20% in fuel bills by providing a hotter, cleaner flame that reduces smoke and soot.

Send the coupon today for further information on new J-M Cerafelt combustion chamber kits.

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Truck Talk

by Chet Cunningham

I KNOW IT'S HARD. I know it takes time. I know it sometimes seems like it's wasted money and time—but driver training stands out in every good outfit as one of the best ways to reduce lost time due to accidents—by reducing the accidents themselves.

Or maybe you only have one or two trucks. What's the harm in doing a little training on yourself? Try these four simple rules the next time you take your fueloil rig out on the road—especially if you do a lot of city driving.

1. "Drive" well ahead when you drive. Aim high with your eyes so you get the big picture of what's going on. Look for problems that might crop up several hundred feet or several blocks ahead of you. Watch oncoming traffic. Don't get trapped by watching only the rig and the traffic light just ahead.

2. Keep your eyes moving, like a jet pilot. Use that rear-view mirror often. Many experts say you should look in your rear-mirror every ten seconds. Look around you all the time. Know what's going on beside you, in back and on the far side.

3. Make sure that other drivers and pedestrians see you. Don't assume that a driver backing out of a driveway knows you are coming. Slow down just in case, try a little toot on the horn. Be ready to stop if you have to.

4. Always have a fire escape. Leave room to swerve away from any danger or plenty of room for a slow controlled stop. Plan your driving ahead by looking ahead—by looking around—and by thinking safety all the time.

The experts at Champion Spark Plug remind us of a fault that most of us are guilty of. Do you know that an oil-fouled spark plug cannot be thoroughly cleaned by merely blasting it with abrasive in a spark plug cleaner?

Champion points out that heavy oil deposits on the plug will pick up the abrasive and it will remain in the recesses between the shell and the insulator. These deposits can seriously affect the plug's ability to dissipate heat at high engine speeds. These deposits must be removed by degreasing in a suitable solvent and dried before blasting again.

Sure wish more truckers and service men would worry about thermostats. You see, if your fueloil truck thermostat gets out of whack it could cause you a $500 motor overhaul job. That's what happened recently to a truck with only 75,000 miles of service. Other rigs of the same make, age and mileage are still going strong.

The driver of this problem truck first reported no heat in the cab. First thought was poor circulation in the heater core, so it was replaced. This

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THE WORLD'S ONLY DOMESTIC OIL BURNER
PACKAGE UNIT

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The Bethlehem DYNATHERM

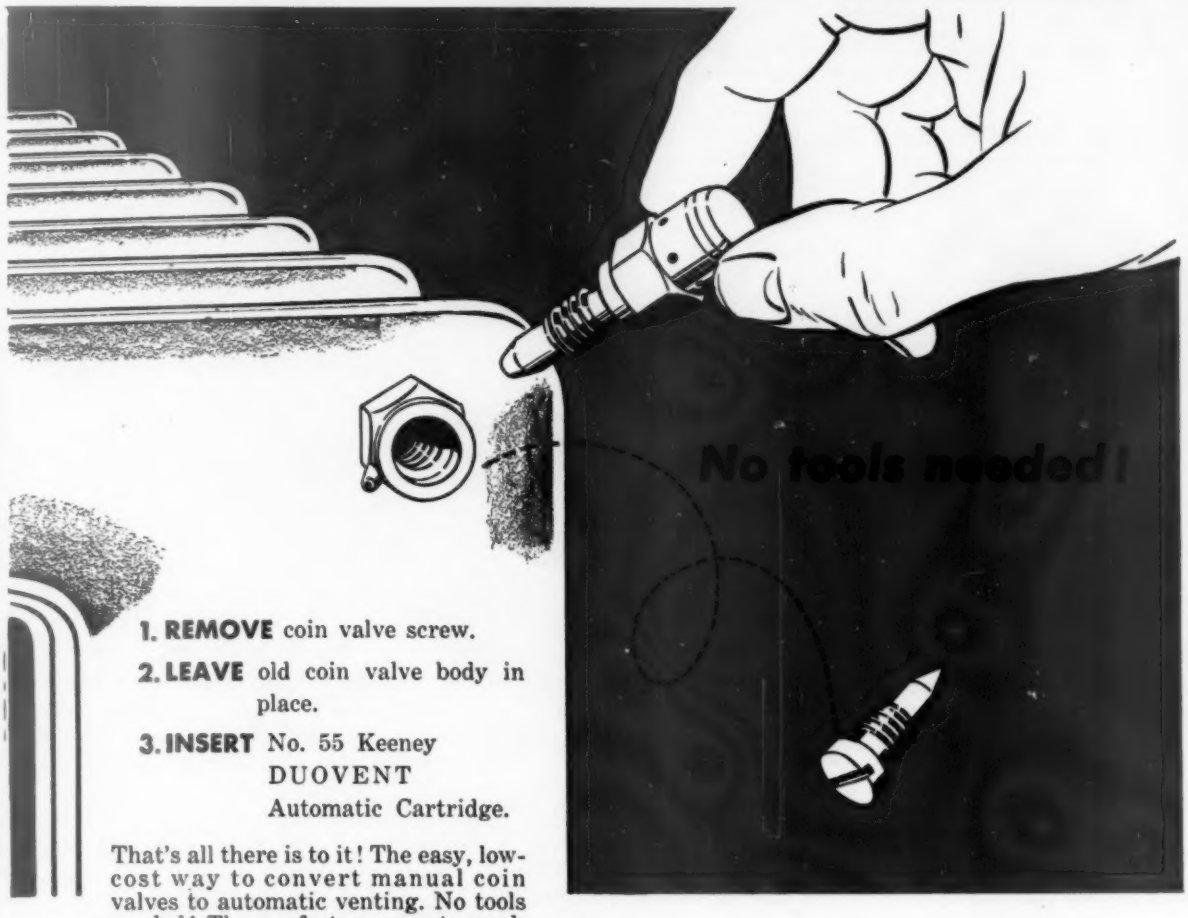
MANUFACTURED ONLY BY BETHLEHEM FOUNDRY AND MACHINE CO., BETHLEHEM, PA.

It's easy to convert manual coin valves to automatic venting...

with No. 55 KEENEY

DUOVENT

AUTOMATIC CARTRIDGES



1. **REMOVE** coin valve screw.
2. **LEAVE** old coin valve body in place.
3. **INSERT** No. 55 Keeney DUOVENT Automatic Cartridge.

That's all there is to it! The easy, low-cost way to convert manual coin valves to automatic venting. No tools needed! The perfect answer to modernization of existing hot water heating systems.

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NEWINGTON, CONNECTICUT

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still didn't bring heat into the cold driver. So the mechanic tried the thermostat. There was the trouble. A thermostat stuck in the open position. They put in a high rate thermostat of 180 degrees. The driver was happy, because he had lots of cab heat.

But after a few weeks he had a new problem. Power output was lower than normal, oil consumption was up and the spark plugs kept fouling out. There were no oil leaks, breathers were OK and compression was normal. That meant an engine overhaul.

They found lots of sludge and a heavy deposit of carbon on the rings and intake valves. The carbon deposits had almost closed off the valve ports. And all because of that stuck open heat controller. Moral: select the right thermostat for your rig and be sure it's working.

Now that a lot of shops are buying their own dry-type batteries and filling them themselves, the problem of handling the acid electrolyte has become serious. Remember, sulfuric acid can cause serious eye damage and also chew up clothing, metal objects and skin.

Here are some hints from the American Battery manufacturers concerning batteries:

Handle acid electrolyte only in a well-lighted room. Be sure there is a water supply handy. Always fill a dry charge battery or container on a work bench or on the floor, never in a vehicle. Electrolyte is corrosive and will damage the finish on metal parts.

Some don'ts: Don't work with electrolyte without safety goggles. Don't punch a container with a screw driver. Don't squeeze an electrolyte container.

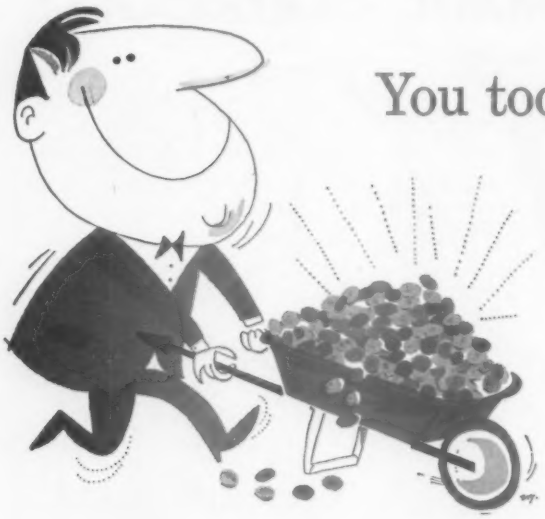
Use an apron or other protective clothing. Use a rubber, glass or suitable plastic funnel for pouring electrolyte. Wash the funnel well after using.

Before discarding an electrolyte container, empty it and rinse thoroughly with water. Flush the drain with water. Destroy the container by mutilation. Do not leave them around for animals or children to play with. Store excess electrolyte in plainly marked containers. Don't store anything else on top of them to prevent them from rupturing.

For every gallon of gas or diesel you burn in your truck engine, more than a gallon of water is produced by the engine. It leaves as a vapor—if the exhaust system is hot enough, otherwise it drips out.

Strange Trucks: At a Long Island airport a Jeep is used to scare seagulls from the runways so military jets can land and take off. Hitting a runway full of seagulls at 200 miles an hour must be distracting!

If your truck is equipped with a full vacuum-operated spark advance, be sure to check the vacuum control diaphragm for leakage periodically. Even though the basic ignition timing is set correctly, insufficient advance at higher rpm's can drastically reduce the power output. You can't fix it by over advancing the timing, either. This means harmful detonation, higher temperatures and plug burning in the low speed ranges.



You too can make more money!

You can build your business into a real money-maker with a Sinclair heating oil franchise. Here are four good reasons why:

- You can offer premium quality products at regular prices. Sinclair Heating Oil contains an exclusive anti-rust ingredient. Result: reduced service calls.
- A strong advertising program—designed to be used at the local level—*where it counts most!*
- A special sales training program—full of profitable new ideas.
- An assured product supply—thanks to Sinclair's huge production and ample storage facilities.

There's much more in the market for you with Sinclair Heating Oil. For details, write: Sinclair Refining Company, 600 Fifth Avenue, New York 20, N. Y.

Sinclair
HEATING OIL

SINCLAIR HEATING OIL
SuperFlame

PROGRESS!

Model D WHISTLER

Fill-Signal for old or new installations. One size only. Use 1¼" vent-pipe throughout.

If you have tanks piped without audible fill-signals, you can now install the latest and finest — the WHISTLER — without disturbing the present piping! You need only the standard WHISTLER. No extra material required. Installation is easy; takes only six minutes during a routine call or summer check-up.

Cost is so nominal you can equip all your jobs for fast, safe deliveries.

WHISTLER
Model D
(actual size)
another fine product from the makers of Galongage, Guardian, and Fil-Thru.

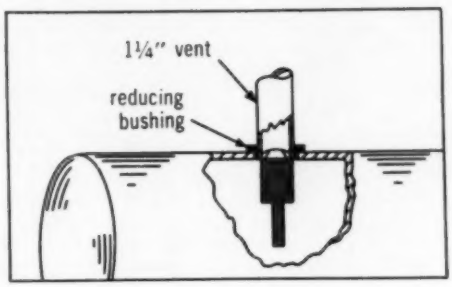
WELL BUILT Completely protected against corrosion. Lasts indefinitely. An engineering triumph for you by Applied Mechanics Company.

SAFE The Whistler is Underwriters Approved. Gives top performance without fail. Has been thoroughly field-tested nationally. Pitched for ideal, easy-to-hear signal. Gives less back-pressure than do competing exhaust signals, should tank be over-filled for any reason.

EASY TO HANDLE The Whistler is ore compact; lighter than ¼th the eight of competing signals. Takes less rage space. Costs less to ship. Can installed in a jiffy. *One size only for installations.*

WER PRICED The Whistler's exclu- design and manufacturing process t lower price to bring you easier more sales, and greater profits. the Whistler is used with the an or other fractional-reading you have *all the advantages of arate instruments at less cost combined signal-and-gauge.*

Writ prices and complete information.



APPLIED MECHANICS COMPANY

whose current engineering personnel have been prominent among pioneers in automatic oil heating equipment since 1919 — gauge makers since 1937.

381-389 CONGRESS ST.
BOSTON 10, MASS.

fuel oil & oilheat

Have you ever had a tire heat up and blow out on a cold day? It happens. Tires don't get hot only because of the temperature of the pavement. B. F. Goodrich says that heat in tires is mainly generated because of the flexing of the tire cord in the sidewall. The amount of this heat increases as the amount or rapidity of the flexing increases. The temperature of a rolling tire usually rises to a level where the rate of generated heat is equal to the rate of cooling.

Most tire cord fabrics lose strength at high temperatures. This, plus the increased tire pressure from the heat expanded air, makes tires highly susceptible to fabric breaks during high heat buildups. The rubber compounds are also weakened with high heat and tend to let the cords rub through their rubber insulation, further weakening your tire.

With this in mind, remember that atmospheric temperature, load, speed and air pressure all figure in determining if the heat buildup in a tire will cause failure.

Any buildup of pressure over 15 pounds is excessive. But never bleed a tire when the pressure builds up. You have two choices, reduce your load, or reduce your speed.

Even if you have only two or five trucks in your yard and the barest essentials in your shop, one piece of equipment you should have is a machine to clean spark plugs. It will save you money on plugs, give you better gas mileage, and keep your drivers happier.

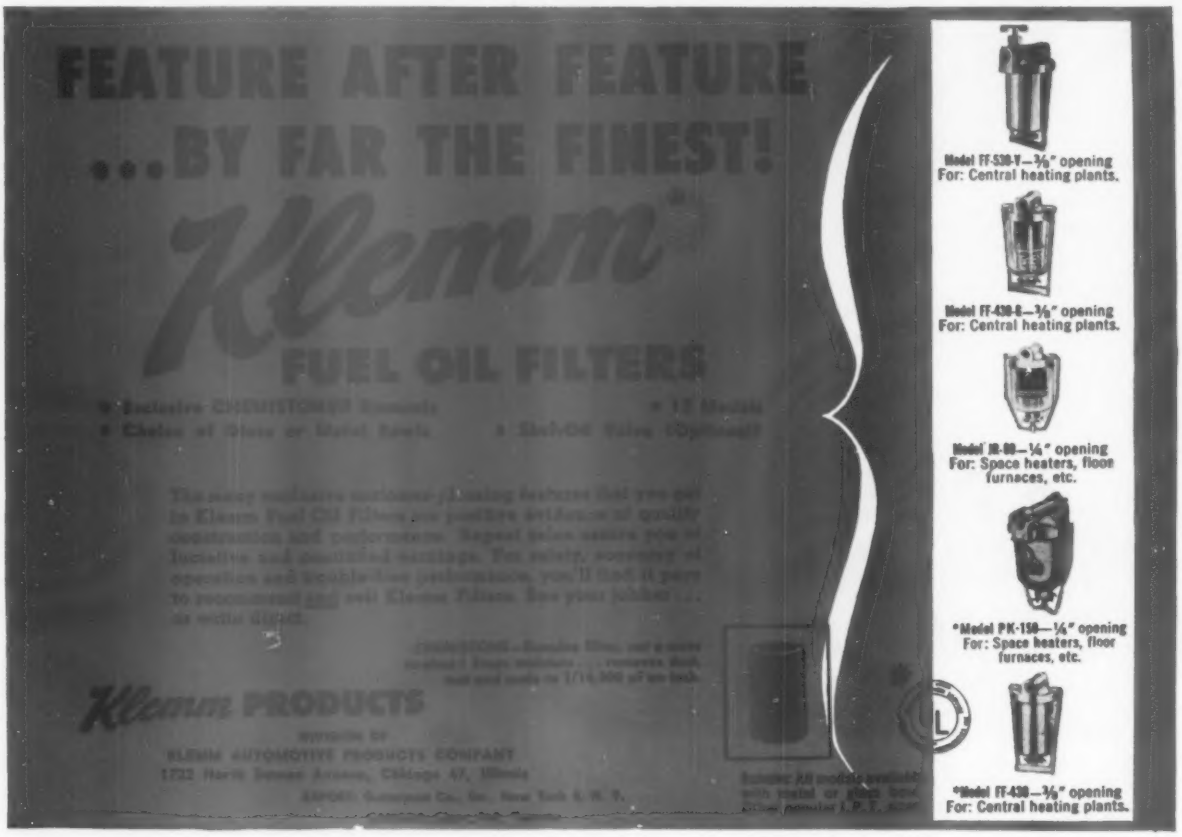
Here are some of the fine points about plug cleaning:

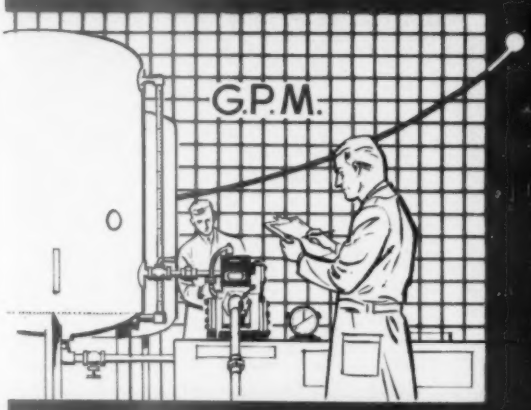
- Remove all oil deposits from spark plugs with solvent, then dry. Clean threads with wire hand brush to remove carbon. Do not use a power tool for this job.
- Blast the inside of the plug until deposits are removed. Never add abrasive to your machine, change it. The abrasive gets rounded corners and becomes ineffective.
- Electrode filing is the most neglected point in plug cleaning. All electrode firing areas should be filed to obtain flat parallel surfaces.
- When regapping, adjust only the side electrode. Never bend the center electrode. Side pressure on it may crack or break the insulator tip. Use a round wire type gauge instrument for accurate measurement.

Be sure that cleaning plugs is a part of your regular preventive maintenance system.

Do the seats in your fueloil trucks look dirty, soiled and faded? There's a new vinyl spray out that conditions spoiled and soiled upholstery in a matter of minutes. It impregnates the fabric and synthetics with a lasting vinyl coating that resists soiling, moisture and comes in a wide range of colors. It might be just what you need.

A distributor rotor can mislead you into making a tune-up that you don't need. In some cases the rotor can be burned, corroded or cracked and still continue to deliver some sort of spark. Examine the rotor carefully for wear and defects when it seems you need a tune-up. If there is any doubt that it isn't doing its job, replace it.





Pays Off!

HIGHER CAPACITIES
TRUER ACCURACY

New GRANCO "K" METERS

Granco

TRUCK METERS

Sundstrand Hydraulics names sales and service Personnel

TO MEET the requirements of its expanding national sales and service organization, Sundstrand Hydraulics, Division of Sundstrand Corp., Rockford, Ill., has made three appointments.

John F. Griffey, formerly at the district office in Summit, N. J., is returning to headquarters to work as a sales engineer in the Midwest. James R. Holmin has been assigned sales engineering responsibilities in the East. He will handle sales in all states on the Eastern Seaboard.

Ray W. Kiefer has been named office service manager. He will oversee the preparation of all service literature and instructional material, will conduct training schools on Sundstrand fuel units, and will process requests for field service.

Frank Scully, Jr., national representative, Scully Signal Sales Co., (right) presents an award to George Christian, A. C. English Oil Co., Levittown, N. Y. Christian was the first prize winner in a contest for fueloil drivers sponsored by Scully Signal Co., Melrose, Mass. Watching the presentation are (left to right) Delancey Nicoll, III, Scully sales engineer; and Edmund Brennan, general manager, A. C. English Oil Co.

Coastal Oil publishes Book to promote water Heaters

OILFIRED water heaters are called one of the brightest potentials in the oilheating business in a new portfolio issued by Coastal Oil Co., Newark.

It points out that some 460,000 water heaters in oilheated homes come up for replacement annually and nearly 200,000 of these are in areas where it is considerably more economical to heat water with oil than with gas or electricity. An additional 200,000 oilfired warm air furnaces are installed annually and all of these are potential customers for water heaters.

The portfolio tells in detail how these sales can benefit both dealers and consumers. It lists eight measures a dealer can take to build up water

FOR HEATING AT ITS BEST
WHEN WEATHER DOES ITS WORST —

HEV-E-OIL BURNERS

Hev-E-Oil burners furnish all the air necessary for combustion, assuring perfect fire control under all weather conditions. Low fire start that builds up gradually to the flame size required means smooth, safe operation. And once the burner is set for greatest efficiency, it *stays* that way no matter what the weather.

A complete package! Fire tested! Automatic, electronic controls. Meets all codes. Easy to install. Models from 5 to 150 gph.

For more information on Hev-E-Oil burners write Industrial Combustion, Inc., 4507 N. Oakland Ave., Milwaukee 11, Wis., Dept. FO-1059.

INDUSTRIAL COMBUSTION INC.

EXECUTIVE OFFICE: 4507 N. OAKLAND AVE., MILWAUKEE 11, WISCONSIN

For those who want the best

T-500 ROOM THERMOSTAT

A heating system is no better than the thermostat which controls it. So why not have the best . . . particularly when it costs no more!

Remember: No other thermostat offers all the features of the T-500.

Signet Controls

For free descriptive literature, send a postcard to the address given below.

SIGNET CONTROLS 3205 S E 13TH AVENUE PORTLAND 2 OREGON

heater sales and provides selling folders, newspaper mats and radio scripts.

This kit was prepared primarily for Coastal distributors, but as an industry service it is available to other dealers outside the Middle Atlantic area served by Coastal.

Four former Crane Employees open independent Branches

FOUR MORE branches of Crane Co., Chicago, have been purchased by former employees to be operated as independent wholesalers of the company's products. This brings to 17 the number of Crane outlets sold to employees.

The new companies are—V.M.W. Supply Co., Falls Church, Va.; N. C. Supply Co., Rocky Mount, N. C.; and Southwestern Supply Co. taking over branches at Pueblo and Grand Junction, Colo.

Sun Oil holds 8 regional Meetings for Distributors

A SERIES of eight regional meetings were held by Sun Oil Co., Philadelphia, for distributors of heating oil beginning September 21.

Meetings were held in Detroit, Toledo, Indianapolis, Syracuse, Boston, New York, Philadelphia and Harrisburg. Among the speakers were C. J. Barrow, research and development department; W. B. Daub, advertising manager, Industrial Products; T. J. Frattini, special representative; and A. L. Anderson, manager, Sunheat and distributor sales, fueloil department.

THE GREAT NEW IMPROVEMENT IN OIL BURNER FUEL FILTRATION . . .

wix®

SPIN-ON TYPE OIL BURNER FILTER

This revolutionary, *new* WIX Oil Filter easily replaces *all* comparable standard fuel oil filters . . . makes cartridge servicing simpler and more profitable. Just a "twist-of-the-wrist" does it—no tools, no filter pot to clean out! It's the self-contained unit that brings new efficiency and new economy to every oil burner operation.

- Exclusive POROSITE pleated paper filtrant
- Over 228 square inches of filtering surface
- Removes even microscopic contaminating particles
- Guaranteed to exceed 120 gph gravity flow
- COMPACT! 5-9/16" high, 2-3/4" wide, 8 ounces
- Listed as Standard by Underwriters Laboratories, Inc.

Install this WIX Fuel Filter on all the burners you service or install—speed up your maintenance, increase your profit margin. Merely insert the die-cast aluminum head in any ⅜" N.P.T., one or two pipe (high or low pressure) oil burner system and . . . SPIN-ON the WIX Filter Cartridge! That's all there is to it. From then on, servicing requires only changing the Cartridge—no mess, no trouble, no time wasted—spin-off and discard the old—SPIN-ON the new!

Head and Filter are constructed of lightweight, rust and corrosion-proof aluminum with the Head featuring an *exclusive* air bleed and a safety locking screw. WRITE, today, for details on how this great, new WIX "SPIN-ON" Fuel Filter can work and make money for you!

wix®

OIL BURNER FILTERS

WIX CORPORATION • GASTONIA • N. C.

In Canada: Wix Corporation Ltd., Toronto

Sid Harvey of Western N. Y. announces company Officers

THE NEWLY-FORMED Sid Harvey of Western N. Y., Inc., is located at 1290 Sheridan Drive, Buffalo 17, N. Y., and will carry a full line of replacement parts for oilburners.

Company officers are as follows: Lawrence Harvey, chairman of the board; Eugene J. Shields, president and general manager; Stephen R. Harvey, vice-president and treasurer; and Dorothea E. Lutz, secretary.

Shields joined the company in 1945 and was vice-president and general manager of Sid Harvey of Pa., Inc., before heading the new company.

Leon J. Boyle, president, Boyle Fuel Co., Spokane, Wash., is shown signing the contract between his company and the local television station for the sponsorship of "Starlit Stairway" for the seventh continuous season. Standing from left to right are James Agostino, general manager of the station; Albert F. Lafky, Boyle secretary-treasurer; and Robert L. Ward, Boyle vice president in charge of sales.

The program is a live, 30-minute amateur talent program presented every Saturday evening. Leon Boyle was the creator and first producer of the show which has won an award as the "Most outstanding television commercial program locally created."

More than 5,000 young people from the Inland Empire have been auditioned. Performers from the show appeared on other radio and television shows.

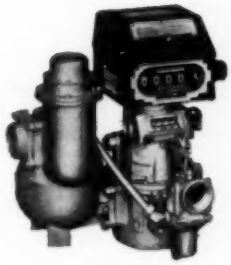
...like having your own CPA at every transfer point

Get a printed ticket for every transaction—from line to bulk plant and to the customer

A. O. Smith Meters are perfect auditors... give fuel oil dealers an unquestionable record of product received and loading rack throughput. On the route, printed meter tickets provide a quick and accurate means of billing.

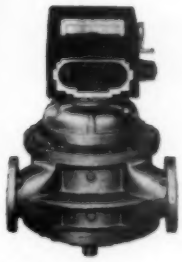
There's a reliable A. O. Smith Meter for every use—"S" Meters for incoming lines and loading rack, "T" Meters for service aboard your fuel delivery trucks.

If your operations are plagued by unexplained losses, or if your accounting system needs streamlining, an A. O. Smith Meter Man can help. Contact your nearest representative or write direct.



"T" truck meter

"S" loading rack and line meter



Through research ...*a better way*

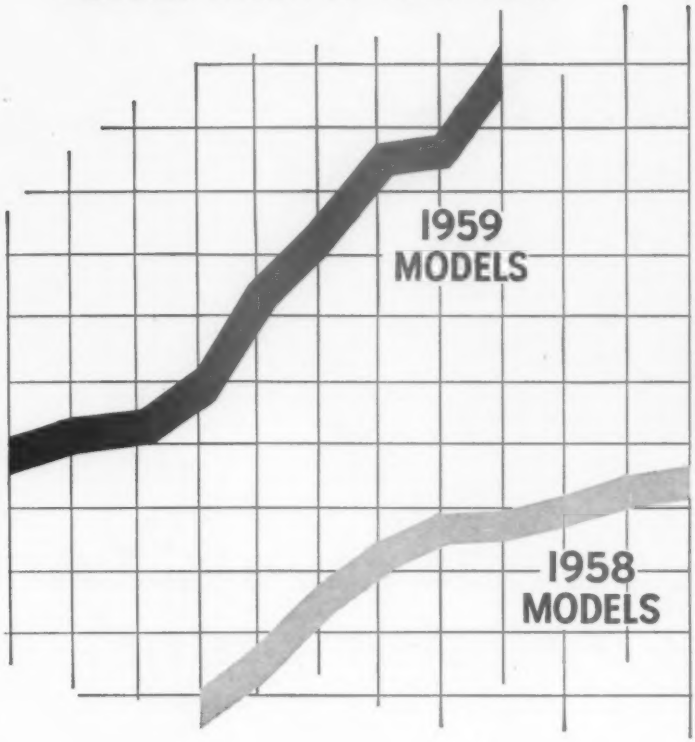
A.O.Smith
CORPORATION

Smith-Erie Division

Factories: 5715 Smithway St., Los Angeles 22, Calif.; Erie, Pa.
Offices: Atlanta 5, Ga.; Chicago 3, Ill.; Houston 2, Texas; Los Angeles 22, Calif.; New York 17, N. Y. Canada: Toronto 12, Vancouver 1.
A. O. Smith INTERNATIONAL S. A. Milwaukee 1, Wisconsin, U.S.A.

The BIG SUCCESS

1959 FORD SUPER DUTY TRUCK SALES MORE THAN DOUBLE THOSE OF LAST YEAR



1960 FORD SUPER DUTIES

SKYROCKETING SALES OFFER ADDED TESTIMONY TO THE TOUGHNESS AND RELIABILITY OF FORD "BIG V'S"— *NOW THEY'RE MORE DURABLE, MORE FLEXIBLE THAN EVER!*

Ford's increase in sales of Super Duty Trucks, while impressive in itself, by no means tells the whole story. Over half of the 1959 unit sales were the result of repeat orders from operators like Trucking Contractors, Inc., who bought because the Ford "Big V" provided the kind of performance and durability needed for their work.

And for 1960, the Ford Super Duties offer additional refinements designed to provide an even greater degree of dependability. Bigger optional axles and increased GVW's permit greater payloads and more profitable operation. Automatic radiator shutters to keep the engine temperatures within the most efficient operating range, submerged-type electric fuel pump to prevent vapor lock, and redesigned wiring for longer, more dependable operation are but a few of the improvements which add to the performance and durability of these units.

The changes offered for 1960 were tested and evaluated by America's foremost independent automotive research organization. The certified results of the studies by this impartial firm (name available on request) provide proof that Ford's Super Duty Trucks are even more dependable.

- **Certified Durability through closer temperature control!** Independent research engineers certify that Ford's thermostatically controlled radiator shutters kept water temperature between 168° and 188° in severe mountain grade operation. The test truck with shutters blocked open

of the Big Truck Field

"Tried 8 in '58—bought 20 more in 1959," says Curtis E. Brost, President, Trucking Contractors, Inc. "In 1958 we bought 8 Ford T-850's with lightweight chassis options and specially built 5-batch bodies which gave us a full extra batch per truck. A 5-batch load is a real strain on the truck when you consider we're 'running the ditches' on this highway paving job in North Dakota. These T-850's worked out so well that we ordered 20 more in '59. Our Ford Tandems with the 477 engine give us good mileage and the drivers are real happy with them. It's a rough go on trucks with soft footing and dust so bad we have to drive with headlights on. Despite such operating conditions, downtime has been negligible and these '477' Fords have given us less trouble than other trucks we have operated."

with Certified Durability

under same operating conditions had a temperature range from 102° to 181°. The temperature variation of only 20° with shutters means less expansion and contraction in engine block and cylinder heads. Higher temperatures with radiator shutters permit leaner fuel-air mixtures with less possibility of raw gas washing down cylinder walls. Warm oil circulates more freely, reducing internal friction. All these factors contribute to longer engine life.

- **Certified Dependability with longer-lived electrical system!** Ford's '60 improved wiring harness and the 1959 wiring harness were subjected to shaker table tests plus constant exposure to oil and water vapors and temperatures of 200°. Certified results prove that the greater resistance to deterioration by heat, oil, water and abrasion obtained with the 1960 wiring harness more than doubles wiring harness life.

- **Certified Reliability with Ford's submerged-type electric fuel pump!** Dynamometer tests of engines with submerged-type electric fuel pump and conventional mechanical type showed that vapor lock was non-existent with Ford's electric pumps at temperatures up to 200°, whereas incipient vapor lock with mechanical pump resulted in a power loss of 9% at an underhood temperature of 200°.

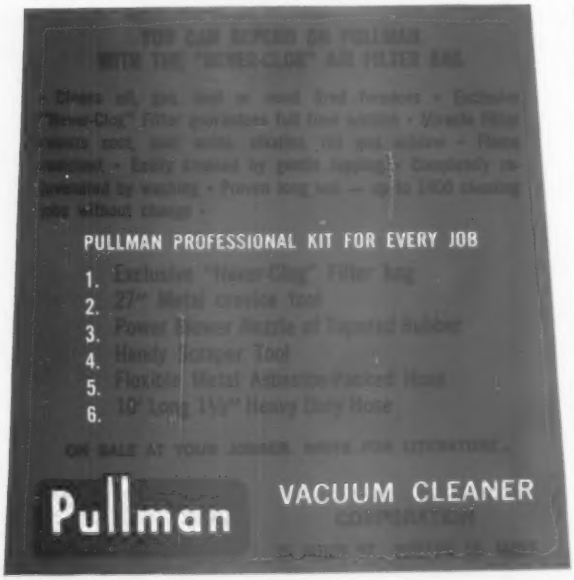
Test results like these plus the experience of satisfied users are important but that is not all. For 1960, the Super Duty line has been broadened to provide even more flexibility in power train options. Get the facts from your Ford Dealer!

FORD TRUCKS COST LESS

LESS TO OWN . . . LESS TO RUN . . . BUILT TO LAST LONGER, TOO!

fuel oil & oil heat

THE WORLD'S LEADING FURNACE CLEANER



NEW PRODUCTS

Sid Harvey Cerafelt Fireboxes; Buna-N permanent tank Bottom

SID HARVEY has announced its Cerafelt firebox, made of a refractory fiber felt manufactured for Sid Harvey by Johns-Manville. Cerafelt fireboxes are installed using only a sharp knife, snips and screwdriver. Complete kit, felt and stainless steel enclosure comes in a compact roll, weighing about 2 lbs. Kit comes in 12″ and 16″ heights; maximum firing rate is 1.75 gph. Can be used to make up round, oval or pear-shaped chambers or installed inside existing firebox.

The permanent tank bottom announced by Sid Harvey is a thick coating of Buna-N (like sponge rubber) bonded to a heavy steel plate formed to fit the contour of the bottom of a 275-gal. tank. This is sealed and clamped to the tank with five rust-proof bands. It carries a five-year guarantee; furnished in 60″, 66″ and 72″ lengths, all are 10″ wide.

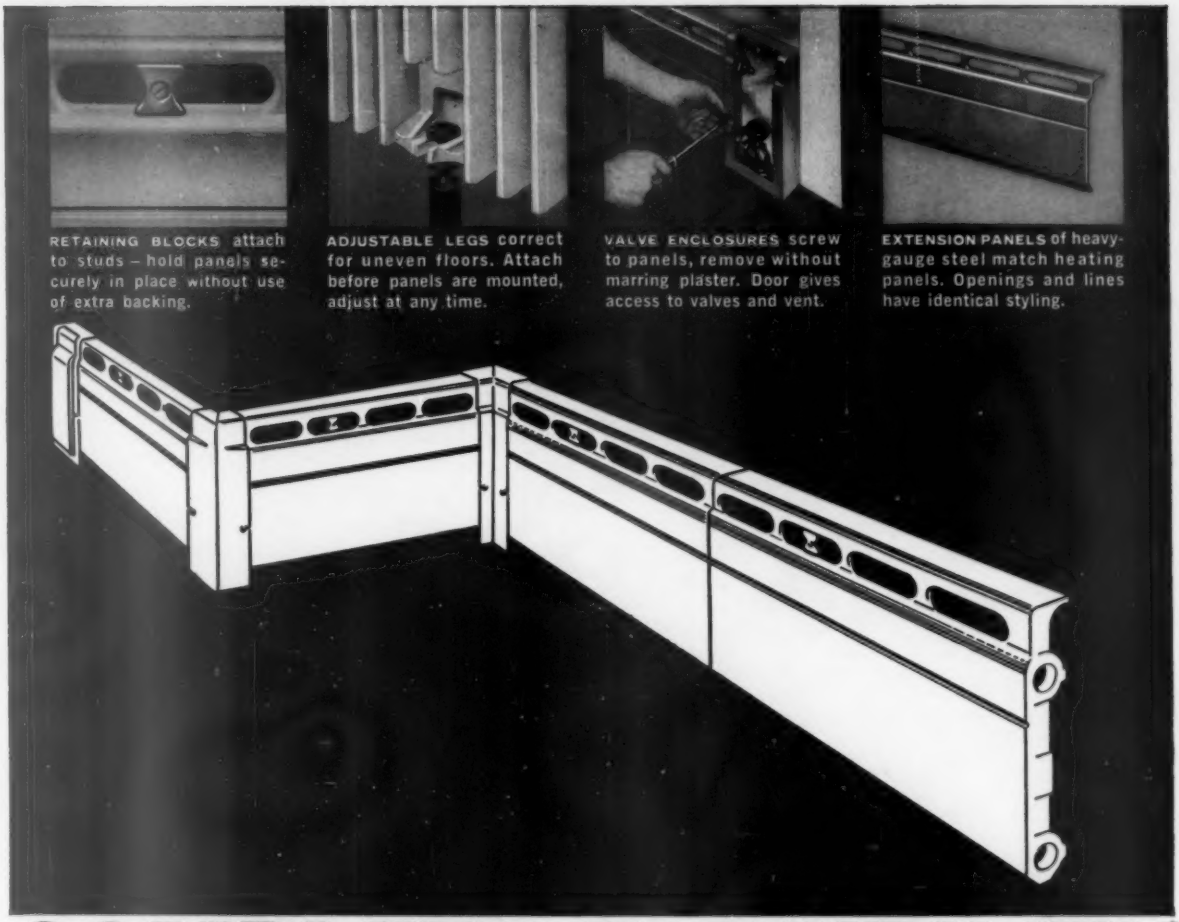
Made by: Sid Harvey, Inc., Valley Stream, N. Y.

Circulating Fans by L. J. Wing put waste Heat in Air back to Work

UNITS for recirculating ceiling-accumulated warm air have been added to their line by L. J. Wing. The units consist of fan, plenum chamber with air guides and revolving or fixed discharge. Revolving discharge is used to change the direction of downward flow, to prevent hot spots and the blocking of flow by machines, stacks of materials and other obstacles.

Eight sizes of circulators are available with fixed discharge or either of two types of revolving discharge. Capacities range from 6,000 to 25,000 cfm. Motors range from ½ to 7½ hp. Designs can be provided for lower mounting heights or greater area coverage.

Made by: L. J. Wing Mfg. Co., Linden, N. J.



RETAINING BLOCKS attach to studs – hold panels securely in place without use of extra backing.

ADJUSTABLE LEGS correct for uneven floors. Attach before panels are mounted, adjust at any time.

VALVE ENCLOSURES screw to panels, remove without marring plaster. Door gives access to valves and vent.

EXTENSION PANELS of heavy-gauge steel match heating panels. Openings and lines have identical styling.

COMPLETE FLEXIBILITY

with Model 10 Radiantrim baseboard panels

Now it's easier than ever to get all types of heating jobs. The American-Standard Radiantrim system lets you handle tough jobs—especially those with high heat loss—profitably. Easier than ever to install because of redesigned accessories, panels come in 12″, 18″ and 24″ lengths for easy, economical sizing in 6″ increments.

American-Standard cast iron radiation for any replacement job

SUNRAD radiators have a cabinet-like front for attractive installation in homes, offices and institutions. Available in two convenient sizes (5″ by 20″ and 7½″ by 23″) and up to 45 sections in lengths for any free-standing, recessed or wall-hung installation.

ARCO slim-tube radiators are designed for use with hot water, steam or vapor systems. Liberal waterways eliminate frequent venting.

CONVECTORS for free-standing, recessed or wall-hung installations . . . have removable cabinet fronts. Available in six styles, 4 depths, 6 heights and 10 lengths for all types of installations.

For more information see your distributor or write: AMERICAN-STANDARD, PLUMBING AND HEATING DIVISION, 40 W. 40th Street, New York 18, N. Y.

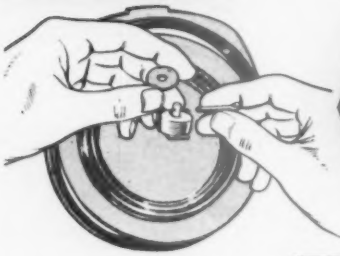
American-Standard and Standard® are trademarks of American Radiator & Standard Sanitary Corporation

AMERICAN-Standard

PLUMBING AND HEATING DIVISION

for oil & oilheat

IMPROVED *Pre-Balanced* draft regulator



...with NEW *"Pick-off"* vane adjustment!

WALKER 34 (Balanced) DRAFT REGULATOR

• Even more sensitive and dependable than its famous forerunner, the Type 34, this *improved* model, WALKER BALANCED TYPE 34, is *pre*-balanced — *at the factory* — for perfect sensitivity to draft variations. And the BALANCED 34 *stays* balanced — *permanently!*

The new *"Pick-Off" Draft Adjustment* makes precision setting of the BALANCED 34 as easy as picking up a stack of coins! Just pull out cotter pin (above) and add or remove as many pick-off counterweight discs as needed to set the BALANCED 34 exactly for particular draft conditions. *No moving parts to corrode or jam, so unit is always easy to adjust. The WALKER BALANCED TYPE 34 gives you finer, foulproof adjustment to closer limits over a wider range!*

The BALANCED 34 also boasts handsome, newly designed frame, improved gate stop to soften closure noise, and enclosed knife-edge life-time pivots.

CHECK THESE BALANCED-34 FEATURES:

- Pre-balanced damper for precise equilibrium, maximum sensivity to draft change.
- New "Pick-Off" adjustment for fast, fine, foulproof, wide-range setting.
- No moving parts to corrode or jam.
- Enclosed knife-edge pivots for life-long sensitive service.
- Heat- and corrosion-resistant vane of finest aluminized steel.
- Improved vane-stop to soften closure noise.
- Newly designed light, durable aluminum frame.

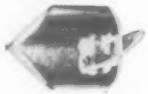
WRITE TO WALKER NOW at the address below for full details on the new BALANCED 34 and for full catalog of WALKER Draft Control products.

ROYAL PURPLE Regulator for smaller central heating plants

SHUR-FLO Inducer-Regulator for gas, oil and solid-fuel plants

JUNIOR LINE for central heating budget control

TYPE BB commercial and industrial control



DOUBLE SWING for gas-fired equipment

VENTURI CAP for heating and ventilating

WALKER MANUFACTURING AND SALES CORP. 1750 Penn St., St. Joseph, Mo.

HRB-Singer fuel use Computer records mean fueloil Consumption continuously

HRB-SINGER has developed a low-cost analog computer to automatically indicate average fueloil consumption continuously. It enables fueloil dealers to keep a precise, up-to-the-minute record of the amount of fueloil customers are using and thus schedule deliveries for the most efficient truck utilization.

Key components of the computer are a cylinder-shaped analog roof-top unit and a recording console the size of a portable typewriter. Instruments inside the roof unit create an electrical equivalent or analog condition of heating buildings exposed to the weather. The analog unit adjusts its energy output to meet any change in weather conditions, the change is relayed electrically to the recording console where it is measured in digital readings called "weather units." The dealer merely substitutes these for degree-days.

The instrument provides a year-round, continuous accounting for fuel consumed in making hot water, as well as heat.

Made by: HRB-Singer, Inc., 90 Schureman St., New Brunswick, N. J.

"Why can't I be on the executive committee instead of always on the entertainment committee?"

At his Chicago oil depot, Mr. C. E. Lund talks to Ben Kijek, driver of this Model AC Mack which was purchased in 1925 and is still in daily use. Recorded downtime on this indestructible old timer has been only a relatively few days in its entire 34-year life! Flanking famous old truck are two other members of Lunoil's Mack fleet—a B-61ST six-wheel tractor and a handsome N-42S cab-forward fuel oil truck.

Here's brand loyalty that has paid off for 42 years

Mack trucks were working for Chicago's H. N. Lund Coal Co. during the first World War . . . and some of the famous old Mack AC Models which the Lunds bought back in the "roaring twenties" are delivering coal to this day . . . doing a good job 34 years later. Amazing? Not if you know how Macks are made. Finest engineering; finest workmanship; finest materials. That's the secret of the dependability, efficiency and long life of a Mack truck.

Today the Lunoil Division of the H. N. Lund Coal Co. still relies on Mack trucks for dependable fuel oil handling. On the long hauls from refinery and bulk plant, the big Mack B-61ST's do the job; while the handsome, husky N-42S cab-forwards make retail fuel deliveries through heavy traffic from one end of Chicago to the other.

The sooner you put Macks to work in your own operation, the sooner you'll start to realize the tremendous profit potential of their bonus cargo capacity . . . their swift mobility in congested areas . . . their strength, stamina and dependability. Check your Mack branch or distributor for full details. He'll help you choose the Mack best suited to your requirements. Mack Trucks, Inc., Plainfield, New Jersey. In Canada: Mack Trucks of Canada, Ltd.

7037

MACK
FIRST NAME FOR
TRUCKS

Quoting on firebox installation?

Use arithmetic to save money for the homeowner

One year's fuel free every five years! That's the story you can tell customers about fireboxes made of B&W Insulating Firebrick.

The arithmetic is based on facts. Because B&W IFB are *light in weight*, they do a better insulation job . . . come up to operating temperature fast, hold heat inside the combustion chamber. That results in 15% to 25% savings in fuel bills per year. Take an average of 20%, and your customer gets savings that equal approximately a year's fuel costs after only five years of operation.

Explain, too, that he will get *better* combustion as well as *clean*, *odorless* heat. Rely on the B&W Insulating Firebrick story to make you the man to see in your community.

A Valuable Guide for Every Installer

Send today for this Handbook!

R-624

THE BABCOCK & WILCOX CO.

Refractories Division

Works: Augusta, Ga.

General Offices: 161 East 42nd St., New York 17, N. Y.

1960 Chevrolet truck Line claims Advances in Ride, Handling, Safety

A NEW suspension system that will provide advances in ride, handling, durability and safety has been incorporated in the 1960 Chevrolet truck line. Independent front wheel suspension with ball joints and torsion rod springs are found on all but two series. Also new is coil spring rear suspension on most one-half and three-quarter ton models.

Styling has been changed along functional lines. All sheet metal is integrated with the new chassis design for more rigid, lower, roomier, more accessible cab and sturdier front end assembly.

Made by: Chevrolet Motor Division, General Motors Corp., General Motors Building, Detroit 2, Mich.

Ramset hammer-in fastening Tools used to install control Systems

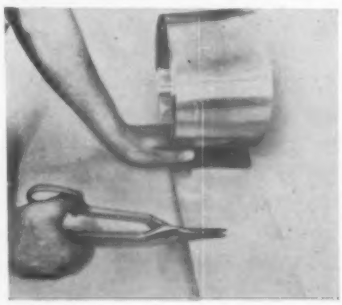
RAMSET FASTENING SYSTEM has designed two new hammer-in fastening tools for the installation of temperature control systems. Shure-Set R-300 sets both ¼" fasteners and 8-32 studs. Shure-Set R-350 sets 8-32 threaded studs only.

Tools will fasten control components to concrete, masonry and light-gauge steel with three or four strikes of a hammer without drilling, filling or plugging.

Made by: Ramset Fastening System, Olin Mathieson Chemical Corp., Cleveland, O.

Calumet & Hecla begins manufacture of light-wall seamless metal Tubing

EXPERIMENTAL PRODUCTION of light-wall seamless metal tubing that can be shipped in ribbon form and inflated at the point of use has been begun by Calumet & Hecla. The new material is to be known as "Strubing" (strip tubing). This new method may make it possible to ship the entire ductwork for the heating system of a seven-room house in a box the size of an orange crate instead of in trailer-truck loads. The Strubing "ribbon" might be strung through the house and then inflated right in place.



Made by: Wolverine Tube Division, Calumet & Hecla, Inc., 17200 Southfield Rd., Allen Park, Mich.

New Sales Builders from THRUSH

A Better ZONE VALVE

for Heating or Cooling

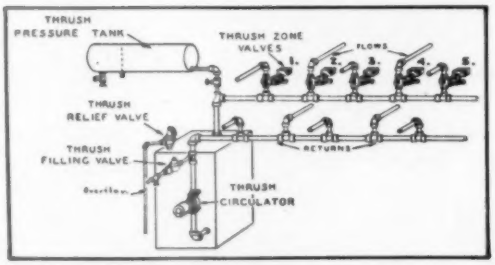
CLOSES TIGHTLY

Handy Manual Adjustment

Simplifies Heating or Cooling Installations

Eliminates Wasteful Overheating

REDUCES COST OF MULTIPLE ZONING



ILLUSTRATES SIMPLICITY OF TYPICAL 5 ZONE SYSTEM

Zoned heating or cooling increases comfort and cuts operating costs. New Thrush Zone Valve also greatly reduces initial cost of multiple zone installations through simplified piping, low voltage wiring and less labor.

THE NEW Thrush Zone Valve is the finest and most scientifically designed zone control valve for hot water heating or cooling systems. Rugged synchronous motor assures positive and quiet operation. This Zone Valve has a manual adjustment for gravity circulation, if needed.

Body, top and motor gear box can be mounted in any of several positions to make installation easy. It operates from standard electrical controls. Sealed contact switches eliminate dirty switch troubles. All parts in contact with water are brass and the seat is a special heat-resistant, non-sticking composition. See your wholesaler for more information or write Department C-10.

Quality Hydronic Heating Specialties

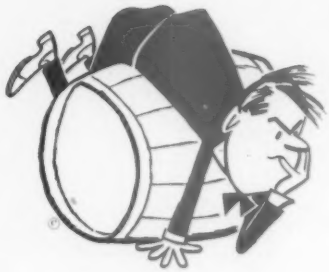
Thrush Water Circulator

H. A. THRUSH & COMPANY

PERU • INDIANA

fuel oil & oil heat

Service Problems Got You . . .



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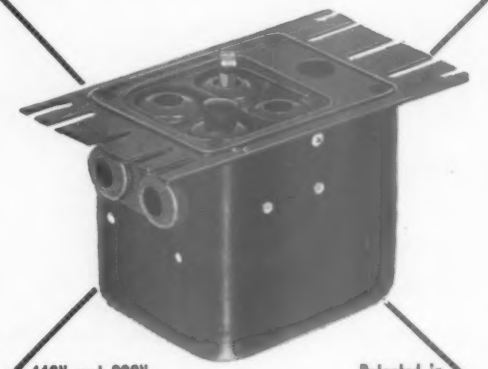
THERMOLOK **ADAPTO** TRANSFORMER will fit 80% of the burners you service.



110V and 220V

Patented in U. S. and Canada

1. UL Approved
2. 3 sets of terminals
3. Takes standard Rajah Fittings
4. Only one service call necessary

Ask your JOBBER to show you ADAPTO TRANSFORMER TODAY

THERMOLOK Manufacturing Co., Inc.
1099 Tulip Ave., Franklin Square
Long Island, New York

Electric furnace Humidifier by Viking has heating element immersed in Pan

TRADE NAMED the Viking "4200" an electric humidifier has its heating element completely immersed in a ceramic water pan for instant boiling action. This supplies a constant rate of moisture to the airstream for correct humidification. It is regulated by a control dial that can be set for low, medium or high humidification.

Features include a teflon coating that simplifies cleaning by diminishing lime build-up; an unbreakable pan; and a lifetime nylon valve.

Made by: Viking Air Products, 5601 Walworth Ave., Cleveland 2, Ohio.

Mobile Radiotelephone by Kaar is made for low power industrial radio Service

THE KAAR IMP is a mobile radio telephone made by Kaar Engineering Corp. and designed for low power industrial radio service. It consists of a transmitter, receiver and power supply in a single compact steel cabinet. A detachable antenna is mounted directly on the cover.

The unit is designed for interchangeable duty as a base station or mobile unit. All controls are recessed. Pilot lamps indicate receive or transmit operating conditions. The Imp can be used as a public address system when an external speaker is added.

Made by: Kaar Engineering Corp., Palo Alto, Calif.

Buckeye fueloil Nozzle for Deliveries speeds Fuel at flow Rate of 125 gpm

A FUELOIL NOZZLE which increases delivery of oil up to 10% has been announced by Buckeye Iron & Brass Works. The nozzle (#125), specially designed for low pressure drop at high capacities, delivers fuel at a flow rate of 125 gpm. It is available with either 1¼" or 1½" IPT inlet, with or without tube and with or without integral check valve. It operates at less than 10 pound drop at 100 gpm.

The companion piece, the Buckeye #126 swivel also comes in two sizes. The hose end is larger than the hose coupling for easier attaching and detaching. Bearings are permanently lubricated and grease-sealed at the factory.

Made by: Buckeye Iron & Brass Works, Dayton, O.

"WE FIND IT PAYS TO USE SID HARVEY'S REPLACEMENT PARTS

— We've been using 'em for 22 years"

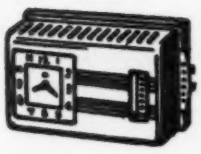
Says Lee D'Anna

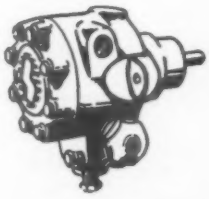
Vice President of Danna Oil Co. Inc., Inwood, N. Y.

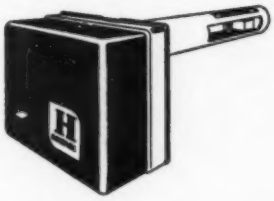
We sell service contracts with parts and we have found that we have practically eliminated repeat calls due to failure of a replacement part, when we use Sid Harvey rebuilts. This cuts our labor costs and keeps our customers satisfied.

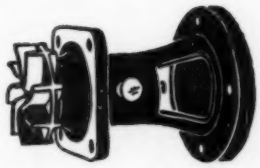
Another thing, Sid Harvey's exact replacements reduce our labor costs by eliminating piping and wiring changes, and their immediate exchanges means another saving of waste time on temporary hook-ups.

Sid Harvey's rebuilts may cost a trifle more than some others but they are worth it because they do last longer and save us money all around.

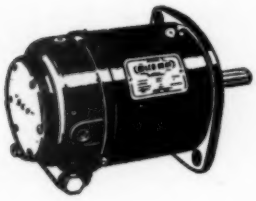








There Are 44 Sid Harvey Stores To Serve You



NEW CATALOG

Get Sid Harvey's new 292 page catalog. A source of information which cannot be equalled anywhere.

It's FREE to the trade, write for it on your firm's letterhead.

SID HARVEY INC.
VALLEY STREAM, NEW YORK

SALES-MAKING

"TEAMMATE"

for Oil Appliances

AUTOPULSE

Automatic Fuel Oil Lifter

Greater customer satisfaction and additional sales go hand-in-hand, when you sell buyers of oil-burning appliances on Autopulse automatic fuel supply. And you have TWO opportunities: selling Autopulse as an integral part of installations, or as a later improvement.

No automatic fuel lifter matches Autopulse. Backed by a 20-year record of reliability, it's still the *lowest price*. Delivers at least 2 g.p.h. *at a full 25 ft. lift* with time-tested dependability and precision.

More than 100,000 installations prove that it's a hard hitting "teammate" for your space heater, range, water heater, or small furnace sales.

SEE
YOUR
DISTRIBUTOR

Electric
AUTOPULSE
Division
WALBRO CORPORATION
Cass City, Michigan

Lincoln Air introduces Condensers and matching evaporator Sections

CONDENSERS with 2, 3, 4, 5 and 7½ hp compressors have been announced by Lincoln Air, featuring accessibility for servicing. Service valves allow the units to be charged in the field, the filter-dryer is accessible and replaceable and a sight glass and moisture indicator are included. Condenser sections are located out-of-doors and connect to the evaporator inside the house. Condenser design provides approximately 3 sq. ft. of finned area per ton of cooling capacity.

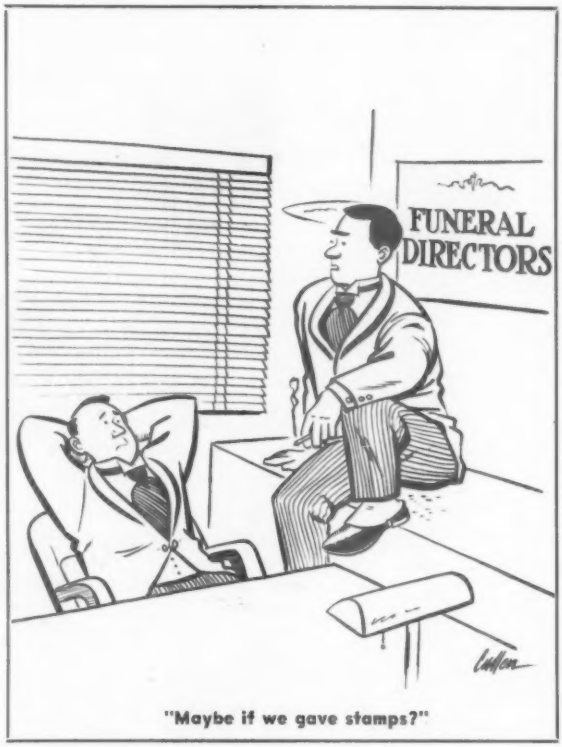
Matching evaporator units are available in four basic types: Model A, upflow evaporator for installation above warm air furnaces; four capacities, 24,500, 36,800, 49,000 and 63,200 Btu/hr;

Model D, downflow evaporator, available in the same capacities as Model A;

Model H, horizontal evaporator to fit alongside the furnace; two capacities, 24,500 and 36,800 Btu/hr;

Model EB, blower-powered evaporator; unit is prewired, precharged and factory-tested. Available in five capacities, 24,500, 36,800, 48,600, 60,000 and 90,000 Btu/hr.

Made by: Lincoln Air Control Products, Inc., Swarthmore, Pa.



"Maybe if we gave stamps?"

BOOST FUEL OIL DELIVERY by 10%

add stops-per-day

NEW BUCKEYE NOZZLE...SWIVEL...for low pressure-drop at high capacity

No. 125 FUEL OIL NOZZLE

Available with either 1¼" or 1½" IPT inlet—with or without tube and with or without integral check valve

- Less than 10 lb. drop at 100 gpm.*
- Higher lift, seat diameter larger than outlet tube.
- Designed for 125 gpm flow rate.
- Easy to open, easy to close because of hydraulically balanced design. No hammer or chatter.
- 4-notch replaceable guard permits easy control.

**Tested on nozzle without internal check*

No. 126 SWIVEL. Available in 2 sizes—1¼" and 1½"

- Fully repairable: remove plug and ball bearings. Bearings and quad-ring seal easily replaced.
- Teflon and ball bearings for easy operation.
- Full pipe size opening at both ends. Female portion of swivel (hose end) is larger than hose coupling—easy to attach and detach.
- Increases hose life. Prevents kinks, twists and damaging tension. Allows hose and valve to turn independently.
- Permanent lubrication of bearings; grease-sealed at factory.

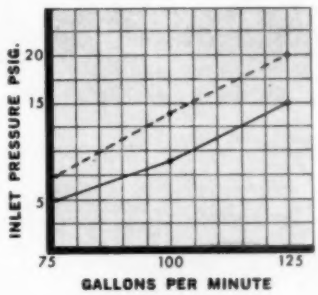
To you, time is money — and increased delivery capacity of your equipment adds to the number of stops your trucks can make per day. This new Buckeye combination is the only such system designed to give you low pressure drop at flow rates up to 125 gpm—virtually an "open pipe" system. Write for more information or contact your Buckeye distributor.

PRESSURE DROP AT INCREASING FLOW CAPACITIES

Typical 1½" fuel oil nozzle*

New No. 125* (1¼" and 1½" sizes—no difference)

**Both less check valve*



Buckeye **BUCKEYE IRON & BRASS WORKS**
Box 883 • Dayton, Ohio

AIR-EASE

The Line...
You've been waiting for

WILL MAKE YOU PROFIT MORE

• Designed with Yesterday's Experience for Today's Market

STYLED, BUILT and PRICED RIGHT!

Shipped Complete — Ready to Install

*Patents applied for.

WRITE FOR Information and name of nearest distributor

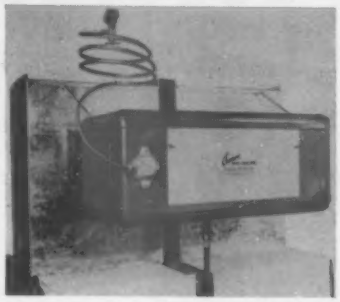
AIR-EASE

B-10

THE JOHNSON FURNACE COMPANY
2129 WEST 117th STREET, CLEVELAND 11, OHIO

Cronco Mist-Master Humidifier made for all forced air heating Systems

ALL TYPES of forced air heating systems can be accommodated with Cronco's Mist-Master humidifier. The unit has no plates, no floats and no moving parts. It can be quickly installed by tapping into warm and cold air plenums. Warm air is drawn through the intake into the humidifier chamber where a fine mist (kept circulating constantly) is absorbed by the dry air. The air is then filtered through a plastic absorption pad before circulating through the house.



Made by: Cronstroms Manufacturing, Inc., 4225 Hiawatha Ave., Minneapolis 6, Minn.

Morrison Du-Air Damper Control designed for central heating-cooling Combinations

THE DU-AIR by Morrison Products is an automatic two-position damper control that provides two-volume air delivery to assure correct amount of air for heating and cooling. The unit is controlled by the heating-cooling thermostat. It is designed to solve problems with heating-cooling combinations where there is too much air for heating and not enough for cooling—or the other way around.

When the Du-Air and the damper are installed the blower speed is set for the maximum air volume needed. Damper control is adjusted for the minimum air needed.

Made by: Morrison Products, Inc., 16816 Waterloo Rd., Cleveland 10, O.

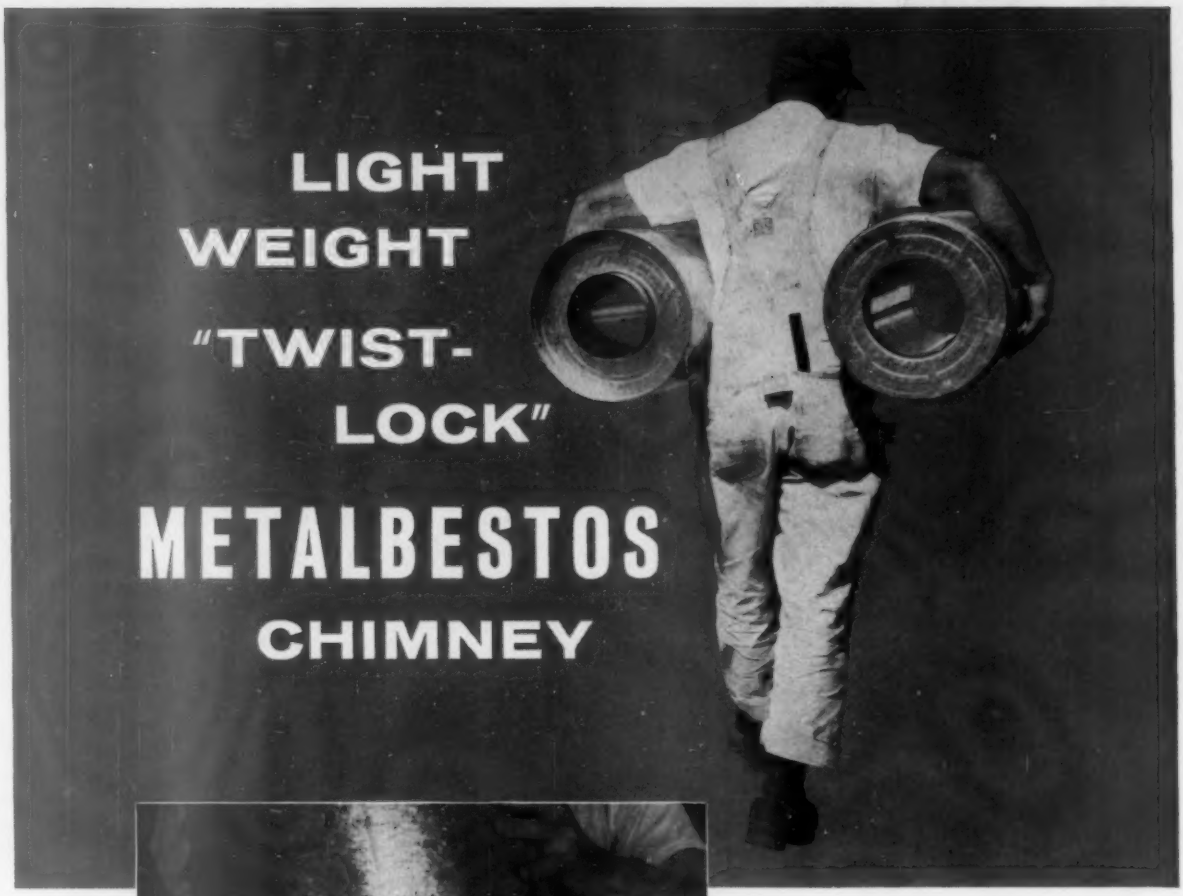
Light and medium Ford truck Line has more than 200 Models in six Series

AVAILABLE in more than 200 models in six series, the 1960 light and medium Ford trucks incorporate increased economy along with greater driver comfort. In the light trucks, the F-100 pick-up offers increased frame rigidity for greater chassis durability and improved handling characteristics. A choice of six pickup bodies with capacities up to 80 cubic feet are in the light duty line.

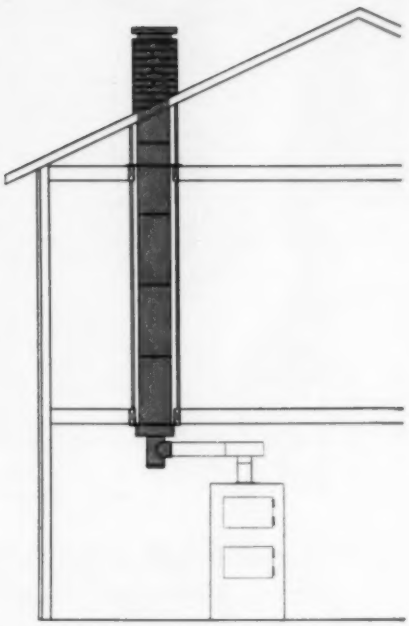
The medium truck line includes both tilt-cab and conventional models with a broad selection of engine transmissions and rear axle combinations. All trucks come in a selection of nine colors in Diamond Lustre enamel.

Made by: Ford Division, Ford Motor Co., Dearborn, Mich.

LIGHT WEIGHT "TWIST-LOCK" METALBESTOS CHIMNEY



Simple "twist-lock" – like putting the lid on a pickle jar (no mastic, cement or screws). Perfectly safe for all fuels and incinerators (listed by Underwriters' Laboratories, Inc.). Finest materials and construction throughout assure lasting performance. Write to Department L-9 for our new METALBESTOS factory built chimney catalog CC-10.



For installation inside or outside of structure. Choice of attractive tops and complete line of fittings.

METALBESTOS DIVISION
WILLIAM WALLACE COMPANY · BELMONT, CALIF.

Manufacturing Plants in Belmont, Calif. • Logan, Ohio • Brockville, Ontario, Canada

Fuel oil & oil heat

with steam heat...

the SECRET is in the VENTING

The faster you vent air out of radiators . . . the faster you get heat into radiators . . . this is the secret of efficient steam heating, and why Gorton Valves provide much larger air outlets for venting air faster.

With Gorton Valves you save on fuel every time the thermostat calls for heat, as Gorton Valves make radiators heat fast with ounces of vapor instead of pounds of pressure.

FAST VENTING VALVES

To make all radiators heat quickly and evenly, there's a fast venting Gorton Valve that's just right for every radiator. Available in 5 sizes for radiators and 2 sizes for mains. A correctly sized Gorton Valve installed on each radiator provides fast, even, comfortable heat in every room.

For steam heat that can't be beat, insist on Gorton Valves. Available from leading wholesalers everywhere.

FOR EVERY STEAM HEATING SYSTEM

GORTON VALVES

Cranford, New Jersey

ESTABLISHED 1867

'THE SURE CURE FOR COLD RADIATORS'

Penn Controls introduces two-piece Unit for commercial-industrial Use

PENN's new two-piece control is for commercial and industrial oilburners and consists of a flame detector and combustion relay. Available for 120 and 240 volt, 50 or 60 cycle service.

The flame detector senses the longer wave lengths of the oil fire, while being relatively insensitive to the shorter wave lengths of hot refractory. The combustion relay provides one stage amplification and may be mounted in any convenient location. This is a transistorized relay which provides almost instantaneous shut-down and a recycling period.

Made by: Penn Controls, Inc., Goshen, Ind.

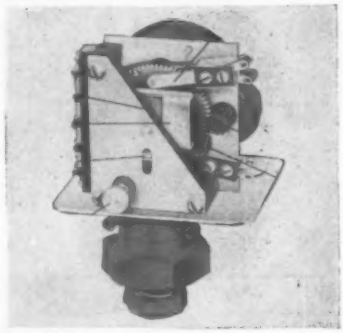
OPW Corp. announces new Tight Fill for underground storage Facilities

A NEW SERIES of 4" tight fill equipment for underground storage has been announced by OPW Corp. The elbows mount permanently on the house and automatically snap onto fill-pipe adaptor when elbow is pressed down. There are three recessed, plexiglass windows giving visual check on fuel flow. Vertical sealing adaptor minimizes collection of dirt. Other components include cap with O-ring seal and a tube which permits bottom filling for increased flow.

Made by: OPW Corp., 2735 Colerain Ave., Cincinnati 25, O.

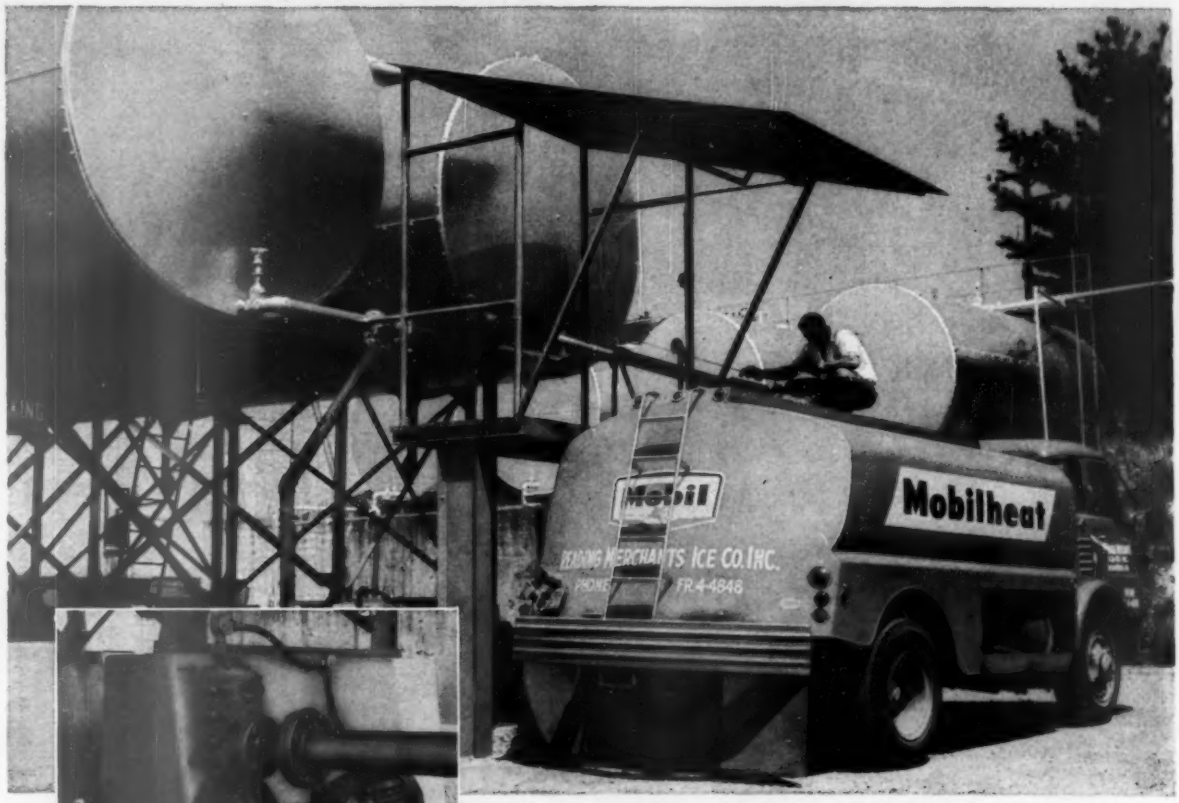
Zonvalve by Heat-Timer is designed to provide zone temperature Control

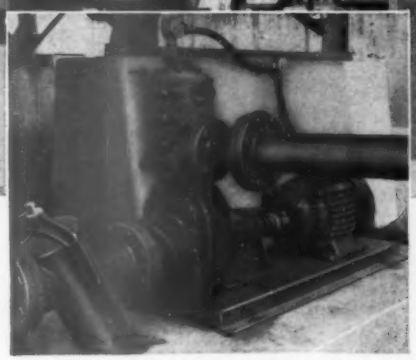
INDIVIDUAL temperature control in rooms or zones is provided by Heat-Timer's Zonvalve. When any thermostat calls for heat, the valve opens to permit flow of hot water or steam to that zone. It is made in all standard pipe and tubing sizes, can be installed in any position on supply lines, radiators, convectors or baseboard. Wiring is low voltage. The Zonvalve package includes the Zonvalve, thermostat, and transformer.



Made by: Heat-Timer Corp., 657 Broadway, New York 12, N. Y.

MARLOW PUMPS® CUT LOADING TIME 80%





At left—This Marlow 32-HELP-13 Self-Priming Pump powered by an explosion-proof motor, speeds truck loading more than 5 times faster than ever before for Reading.

Increase Home Deliveries 50% Per Truck With Marlow Pumps

In order to cut costs and improve service to fuel oil customers, Reading Merchants Ice Co., Inc. of Reading, Pa., has just completed a full program of modernization. The program included the addition of two new storage tanks which brought Reading's above-ground capacity up to 125,000 gallons.

To reduce filling time for their home delivery trucks, the firm installed a Marlow 32-HELP-13 Self-Priming Pump to speed gravity flow from the tanks. As a result, Reading now loads trucks at 560 gpm—*over five times faster than before!* Not satisfied with just speeding up truck loading, Larry Houck, Reading's General Manager, installed Marlow 2C2G pumps on their six 3,000-gallon trucks and *jumped home delivery rates from 40 to 100 gpm!*

According to Mr. Houck, a driver — with old equipment — could make 24 stops in an 8-hour day. Now, with Marlows, he can make 38 stops in 8 hours, increasing daily delivery from 4,000 gallons to 6,500 gallons.

After using Marlow equipment for over a year, Reading has increased the effectiveness and profits of their operation. "Of particular appeal is the high speed truck loading and home deliveries that cut operating costs," according to Mr. Houck. "I am very well pleased with the performance of Marlows, and plan to use them for all future improvements at Reading," Mr. Houck adds.

Marlow makes a comprehensive line of self-priming centrifugal pumps to handle petroleum products in the bulk plant or on home delivery trucks and transports. For complete details see your Marlow dealer today or write direct for Bulletin PM-06.

8-315

Marlow PUMPS®

MARLOW PUMPS®

DIVISION OF BELL & GOSSETT CO.

Midland Park, New Jersey

Morton Grove, Illinois — Longview, Texas

fuel oil & oilheat

On "Old Ironsides," the U.S.S. Constitution, Waldo White reaches for a belaying pin. The famed frigate of the War of 1812 is open to the public in the Boston Navy Yard.

Behind Old North Church, on Revere Mall, stands this famous bronze statue of the great patriot. Waldo also visited Paul Revere's house.

Waldo sees the Old North Church where lanterns—"one if by land, two if by sea"—signalled Paul Revere to start his famous midnight ride.

His Future Certain... Solar Heat Dealer Studies the Past

Sees Colonial Boston during local oil heat convention

WALDO WHITE sells a lot of Gulf Solar Heat around Gardiner, Maine. But he always manages to find time to learn more about early American history. It's his favorite pastime.

"My customers need heat nine months every year," says Waldo White. "But because I sell Gulf Solar Heat, I have plenty of time to pursue my hobby. Solar Heat is hydrogen-purified to burn cleaner. That's why I don't have many time-consuming service calls any more."

Waldo started working for the Gardiner Coal & Supply Company as an employee right after World War II. Now he's part owner.

At first he sold a competitive brand of heating oil. But for the past five, long, cold Maine winters he has been selling Gulf Solar Heat.

He knows the fuel business from every angle and Waldo's *plenty* sold on Gulf Solar Heat. His customers are, too!

• • •

Waldo White praises the hydrogen-purification process that enables Solar Heat to burn exceptionally clean. And—like all Gulf Solar Heat dealers everywhere—he knows from experience that cleaner burning heating oil means fewer service calls and "call backs."

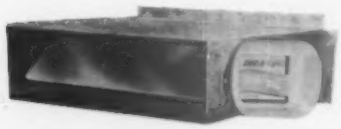
Profits are bigger because service calls are fewer—they're cut to the bone by hydrogen-purified Gulfined Solar Heat.

Why not phone your nearest Gulf office and get the *full* story on new Gulf Solar Heat. Also learn the many other sales advantages you can enjoy as a Solar Heat brand reseller. *Do it today!*

Of course, Waldo White visited the oil heat convention, too. To prove it, here he is with Rene Beauregarde, Solar Heat Marketer for Gulf's Boston Division.

Econo's Zone-A-Trol damper Actuators provide each room temperature Control

ROOM BY ROOM temperature control is provided by the new line of low voltage, motorized Zone-A-Trol damper actuators. They can be used on any new or existing airconditioning or warm air heating system. As the thermostat calls for heating or cooling the Zone-A-Trol opens the damper and lets the air flow until the thermostat is satisfied.



On residential cooling systems, the actuators permit the full cooling load to be shifted to living areas during daytime hours, and to bedroom areas for night time. No BX cable is required and wiring is simple. Each is individually controlled by a three wire thermostat located in the corresponding zone.

Made by: Econo Products Co., Division of Viking Instruments, East Haddam, Conn.

Delco adds two Conditionair Furnaces to Line of residential heating Units

TWO NEW OILFIRED Conditionair furnaces have been added to Delco's line. These are "cabinet-type" models, designed for lower heat loss homes or in zone heating systems.

A Delco fuel converter combines a Delco oilburner with a stainless steel combustion chamber, designed for fuel-saving operation. Units have a direct drive, high-capacity centrifugal blower, powered by a 1/6 hp motor, suspended on rubber bushings. Both new units are of a compact design, permitting closet installation. One model is a counterflow unit for perimeter heating; the other is designed for overhead duct systems.

Made by: Delco Appliance Div., General Motors Corp., Rochester 1, N. Y.

Fueloil lawn Bib offered as Protection against oil Spills or oil nozzle Damage

CHARLES BRAGA has developed a fueloil lawn bib—for which he has applied for a patent—to be used by a fueloil truck driver when making a delivery to an underground tank. The bib fits around the fill pipe to protect the lawn against oil spills and to guard against the possibility of nozzle damage to areas immediately around the fill.

The bib is made of lightweight, absorbent and washable material. Complete information about the bib is available from the inventor.

Made by: Charles Braga, 2356 Wantagh Ave., Wantagh, N. Y.

HART HEAT DIVISION

Avery Farm Machinery Co.

Peoria, Illinois

ANNOUNCES

the purchase of the Oil Burner Department of the

MT. HAWLEY MFG. CO.,

Peoria, Illinois

Effective August 18, 1959

All four of the Mt. Hawley Series "G" burners are now in production and henceforth will be designated and sold as HART Series "G" burners.

Repair parts and complete burners will be available from Hart Heat factory at Peoria, Illinois.

These additional Series "G" Hart Models will in no way affect the production and sale of all Hart Series "HCM" and Patented Pulsationless "SUPRA-FLAME" models.

HART HEAT DIVISION • Ft. of Leland St., Peoria, Illinois

New finger-tip controlled, high pressure nozzle cuts delivery time in half, eliminates closing shock and leakage

FOR FUEL OIL DELIVERY:
1¼ in.—AA 4177
1½ in.—AA 4161

ALUMINUM SWIVEL
1¼ in.—AA 4188-125
1½ in.—AA 4188-150

Order your trial nozzle by number

FOR AIRCRAFT SERVICING:
1½ in.—AA 4171-5
2 in.—AA 4158-5

Order your trial nozzle by number

Balanced action of new lightweight aluminum nozzle permits opening against 150 psi pressure with only one finger, is adjustable to various closing speeds without removing the nozzle from the hose, provides shockfree and leakproof closing under all operating conditions. Full streamlined area at all points offers unrestricted rate of flow under all operating pressures. And new lightweight aluminum swivel with nylon bearings can be supplied to eliminate kinks, twists or damaging tensions on the hose.

Take advantage of this introductory offer! Try one of the new nozzles for two weeks. If you are not entirely satisfied with its operation, return it for full credit or refund.

PHILADELPHIA VALVE COMPANY

ARAMINGO AVENUE AND EAST TIOGA STREET, PHILADELPHIA 34, PA.

DISTRIBUTORS

NORTHEASTERN PETROLEUM SERVICE & SUPPLY, INC., 37 BROOKLEY ROAD, JAMAICA PLAIN 30, MASS. • OIL MARKETING EQUIPMENT COMPANY, 325 FREMONT STREET, SAN FRANCISCO 5, CALIF. • HOWARD SUPPLY COMPANY, 5125 SANTA FE AVENUE, LOS ANGELES 11, CALIF.

ESPA Meeting

(*Begins on page 70*)

Next, Braun went on, "We go to the builder and analyze his house; our independent engineers survey the model home and we show the builder at realistic current rates that what we say is so—that it costs much less to heat better with oil. We will advertise him as a good builder and contribute heavily to the builder's advertising program to sell his homes."

Moreover, "We will have our men on his job to tell the prospective homeowner who buys this oilheated home that he will save money by insisting his builder give him oil heat. We will post this prominently in the builder's models; we will give him signs to put outside his house.

"We will give him extra salesmen (ours) on his job Saturday and Sunday who sell oil heat, as well as sell his home. This stirs the builder's interest. You have flattered him; you have touched his pocketbook."

Braun pointed out that this aid is difficult and expensive, it represents positive action that can be undertaken by a united oil heat local chapter.

Concluding he said, "There must be continued development and follow-up of each builder account. There must be no chance whatsoever for a misunderstanding, because of a faulty installation or some installation trouble, to come between a builder and the fueloil dealer. He must continually and constantly maintain good sound customer relations with his builder. The depth to which he does this will be the answer in which he develops and keeps the new home building market and enables him to sell oilheating equipment to the builder."

Over the past year, dealers have been quick to accept the new low-cost Honeycomb Filter Tube. Now . . . a new combination of materials has made this tube even better. The *new* Honeycomb Filter Tube features an improved film of fibre napping across hundreds of filtering tunnels. You are now sure of the ultimate in protection against oil burner failure due to oil impurities.

Best of all, improved methods of automation and volume production enable us to maintain the low price which has proved so popular. Insist on the *new new* green Honeycomb Filter Tube — in the green wrapper — at the low low price.

COMMERCIAL FILTERS CORPORATION
MELROSE 76, MASSACHUSETTS
PLANTS IN MELROSE, MASSACHUSETTS AND LEBANON, INDIANA

Operation Research

WILLIAM H. HENWOOD, Meenan Oil Co., Levittown, Pa., told about a most interesting project his company has undertaken. A professor has been engaged to chart records of service calls to enable Meenan, for example, to forecast how many calls the company will get this season; how many calls each day; total for each month; total for the full year.

Also, the charts have been projected to enable the service dispatcher to determine by 10 o'clock each morning the total calls to be expected that day. Thus, he is able to make a decision on facts and schedule his service manpower for the day.

In addition, Henwood pointed out, the charts are expected to enable eventual service scheduling that will insure that every service call is completed within a maximum of two hours. Recent records indicated an average time of two hours, but the worst cases sometimes waited two or three times as long.

Other aims of the project: To prove the effectiveness of the company's service checks on burners; determine expected parts mortality for this and future years.

Henwood pointed out that the system went into operation in July, but he cited several remarkable checks that indicated that the potential effect of the plan could be widespread. For example, during the month of July the chart indicated that a total of 1,656

TWO NEW OIL FURNACES

MODEL U-OB

MODEL CF-OB

NEW! UPFLOW MODEL U-OB

60" low x 20"-27" wide x 32½" deep

4 sizes: 84,000–95,000–112,000–140,000 Btuh

This brand-new oil-fired winter air conditioner is shipped completely factory-assembled and wired, with burner installed. Burner and controls are completely enclosed in an attractive cabinet that's so compact you can install it almost anywhere—basement, utility room, game room, hallway, alcove.

The small size is made possible by a new-type sectional heat exchanger that gives more heating surface in less space, extracts maximum heat—and gives *you* a strong fuel-economy sales story. Both the primary control—with flame-sensing device in the burner blast tube—and the fan-and-limit control are factory-connected to a single Central Control Station.

NEW! COUNTER-FLOW MODEL CF-OB

65" low x 20"-24" wide x 32½" deep

3 sizes: 84,000–95,000–112,000 Btuh

Here is the best-engineered counterflow unit made today.

For example, a new-type sectional heat exchanger provides maximum radiation surface in minimum space. The new Central Control Station handles *every* operation of the furnace automatically. The new primary safety control is factory-mounted right in the burner blast tube.

Both the U-OB and the CF-OB are equipped with the proven American-Standard "ACD" burner, which has earned a reputation among dealers as "the most reliable burner on the market." These two units are *all* you need to handle 95% of your oil-fired installations—basement, utility or counterflow. (If you need larger capacity, a two-furnace installation has definite advantages.) Units convert easily to gas . . . cooling is easily added. Get the spec sheets and the low competitive prices at your American-Standard distributor today.

American-Standard Products

AMERICAN-Standard

AIR CONDITIONING DIVISION

Elyria, Ohio

calls could be expected; actually there were 1,666.

Perhaps more importantly, though, Henwood pointed out that the forecast went completely haywire for the first two weeks of August. Immediately, though, he was alerted that something was wrong. A fast check of service records revealed a large number of water pump-outs from underground tanks. The first two weeks of August in Levittown were particularly rainy and stormy. A quick check uncovered the fact that fueloil drivers were not putting on fill caps tightly and, further, they were not reporting cracked fill boxes. This enabled the company to correct the situation with this result: For the first two weeks of August, the chart indicated 696 calls and there were 824; for the last two weeks of the month the chart predicted 796 calls and there were 797.

So, besides the apparent ability to predict service activity in advance, the charts have the added advantage of permitting quick action when some unusual situation arises.

You can *net* more dollars on every Heating Job *with famous Herco Quality!*

First, you cut down on service headaches. Herco does it with QUALITY in design, materials, workmanship.

Easier installations. Every Herco is a complete "package" ready to hook up. Each unit is completely wired and individually fire tested at the factory.

The price is right. You get full value and profit at a price competitive with any manufacturer . . . plus a gilt-edged guarantee and service. Dealers and customers alike have been happy with Herco since 1927.

IMPROVE YOUR BUSINESS . . . learn more about Herco products. A letter brings free catalogs and a chance to see-for-yourself. Herco Oil Burner Corporation, Lancaster, Pa., U.S.A.

OIL THRIFTY HERCO

A TYPE AND SIZE FOR EVERY INSTALLATION.

OIL BURNERS—Firing rates 0.5 to 20 gph.

BOILER BURNER UNITS—8 sizes, 115 to 840,000 BTU.

HOT WATER SUPPLY BOILERS —7 sizes, 100 to 1000 gph.

WARM AIR FURNACES 12 models, completely assembled.

Increasing fueloil Sales

FIVE WAYS to get customers were cited by William F. Briggs, Valley Oil Co., Middletown, Conn.: Sell new equipment; steal from competitors, follow-up newcomers in town or removals within town; build up reputation and prestige of your company; buy up smaller fueloil companies.

Briggs explained that Valley Oil has hired a sales force to sell fueloil accounts. They are salaried salesmen —no commissions—with a quota of 200 fueloil accounts and 25 equipment sales a year. They consistently produce more than their quota, Briggs said. They are paid $115 a week, plus a rental car, which the salesman can use for both business and personal use.

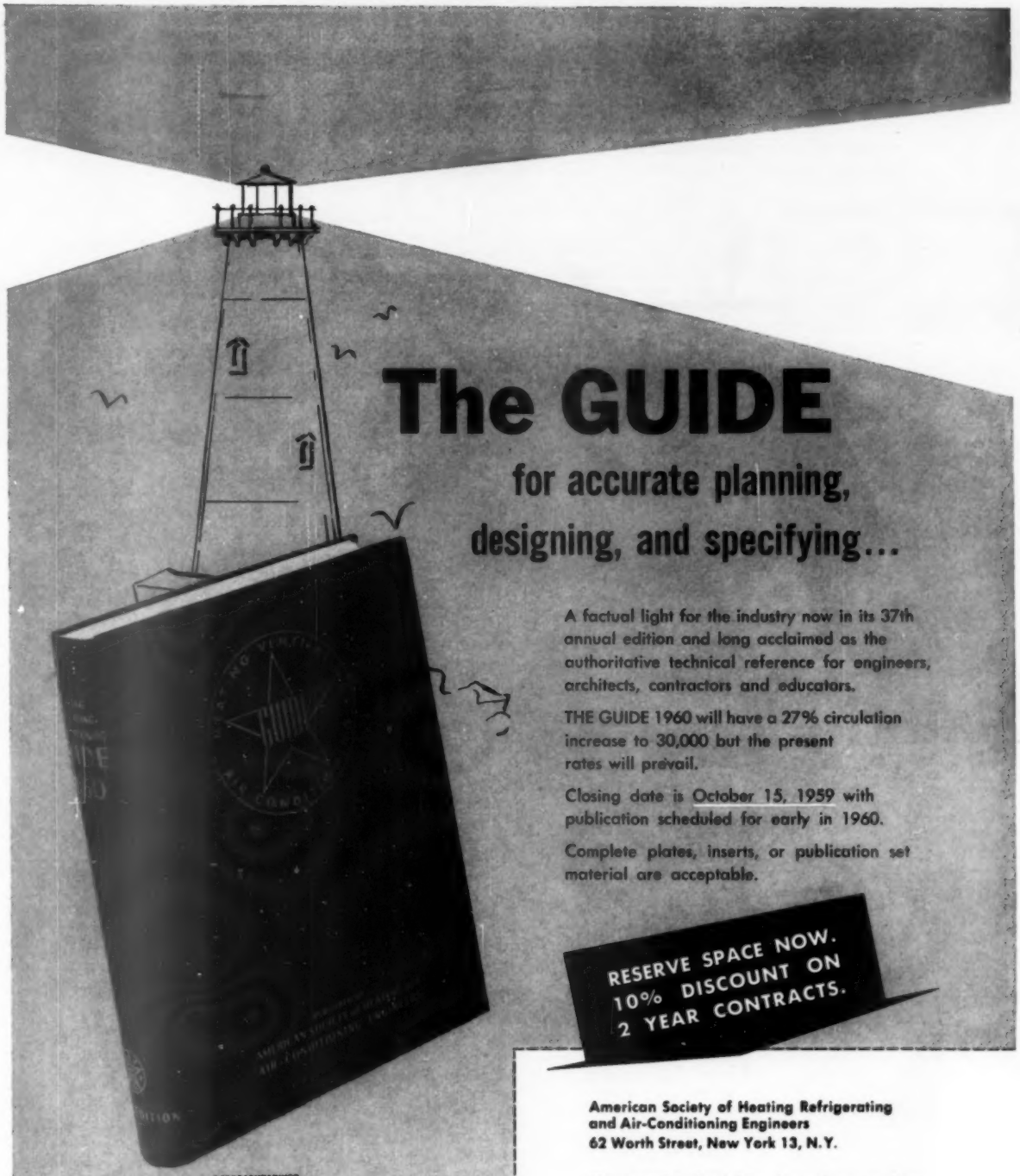
The company changed its thinking about the value of an oil account when it began to go after new ones seriously, Briggs said. Whereas anybody who sold an oil account used to get $2, now the company has an elaborate premium plan to reimburse anybody who turns in a lead.

Valley Oil employs a lot of newspaper advertising and direct mail to build up leads, plus a congratulations card sent to anybody in the area to whom something pleasant happens. A girl collects clippings about promotions, anniversaries and the person involved gets a personal card of good wishes from Valley Oil.

Briggs pointed out that a great deal of encouragement is given the salesmen to build up a feeder system of prospects. They systematically start out with their family, relatives, neighbors, trades people—anybody they deal with—to build up future sources of leads for fueloil accounts. They cultivate contacts in community affairs, social and service clubs, churches, banks. Further the salesman has a schedule whereby he makes good will calls on present customers.

Valley Oil uses the Welcome Wagon service, also. Each new resident gets a small gift, but if he becomes a Valley Oil customer he gets an electric percolator.

Briggs concluded, "This whole program certainly is no mystery; it's merely a matter of expending the time and money necessary to organize a sales force to sell fueloil accounts."



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for accurate planning, designing, and specifying...

A factual light for the industry now in its 37th annual edition and long acclaimed as the authoritative technical reference for engineers, architects, contractors and educators.

THE GUIDE 1960 will have a 27% circulation increase to 30,000 but the present rates will prevail.

Closing date is October 15, 1959 with publication scheduled for early in 1960.

Complete plates, inserts, or publication set material are acceptable.

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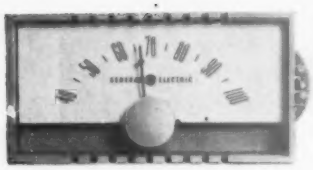
AMERICAN SOCIETY OF HEATING REFRIGERATING AND AIR-CONDITIONING ENGINEERS
62 WORTH STREET, NEW YORK 13, NEW YORK

fueloil & oilheat

CHOOSE FROM GENERAL ELECTRIC'S LINE OF

THERMOSTATS

. . . your choice of three distinctive, smartly styled new *Straight-Line* thermostats or the familiar "K" thermostat, all designed around G.E.'s proved, dependable mechanism.



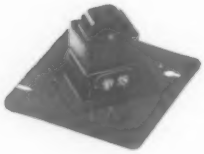
3AHT20 Low voltage (24 volt) 2 wire heating service, 55 to 85 F. Variable heat anticipator 0.2 through 0.8 amps. SPST. Snap action mechanism. Adjustable temperature differential. Large, easy-to-read thermometer dial.

3ACT20 Low voltage (24 volt 2 amp max) cooling service, 55 to 85 F. Same smart design as heating model. Fixed cooling anticipation. SPST. Makes contact on temperature rise.

3AAT30 Low voltage (24 volt—2 amp max) heating-cooling thermostat with sub base. Manual or automatic control of fan. Standard SPDT contacts. Variable heat anticipator. 0.2 through 0.8 amps. HEAT-OFF-COOL selector switch. Fixed cooling anticipation.

K1AN200 Low voltage (24 volt) heating service, 55 to 85 F. Variable heat anticipator 0.2 through 0.8 amps. Adjustable temperature differential. Standard neutral grey cover, aluminum strap with liquid thermometer.

OUTDOOR CONTROL SYSTEM



Designed to work with either the new straight-line or the K thermostat, this G-E outdoor-indoor control system provides an economical means of compensating for loss of heat through outside walls during cold winter weather.

Outdoor thermostat Low voltage (24 volt) reacts to outdoor temperature before winter cold penetrates walls to cause discomfort.

24-volt transformer Provides current for system economically, safely. Installs handily on any standard conduit box.

MASTER CONTROLS

These General Electric master controls are safety controls, designed to operate the oil burner and help protect the system. Like all G.E. controls, they're easy to service and install. Features: constant or intermittent ignition. Locks out on ignition failure. Recycles on flame failure during normal heat run. Positive safety timing.

Stack-mounting, 90 second lock out	
curved flange, welded helix, 115 v, intermittent ignition	CR7865A101A2
curved flange, welded helix, 115 v, continuous ignition	A101B2
curved flange, welded helix, 115 v, continuous ignition, line voltage	A101L2
curved flange, welded helix, 230 v, intermittent ignition	A101A3
curved flange, welded helix, 230 v, continuous ignition	A101B3
curved flange, bolted helix, 115 v, intermittent ignition, high temp. bimetal	A101C2
curved flange, bolted helix, 115 v, continuous ignition, high temp. bimetal	A101D2
curved flange, bolted helix, 230 v, intermittent ignition, high temp. bimetal	A101C3
curved flange, bolted helix, 230 v, continuous ignition, high temp. bimetal	A101D3
flat flange, welded helix, 115 v, intermittent ignition	A101H2
flat flange, welded helix, 115 v, continuous ignition	A101J2
flat flange, welded helix, 230 v, intermittent ignition	A101H3
flat flange, welded helix, 230 v, continuous ignition	A101J3
Remote-mounting, 25 second lock out (for use with 3AHD2 Flame Detector)	
intermittent ignition, 115 v	A105A2
intermittent ignition, 230 v	A105A3
continuous ignition, 115 v	A105B2
continuous ignition, 230 v	A105B3
Remote-mounting, 45 second lock out (for use with 3AHD2 or D4 Flame Detector)	
intermittent ignition, 115 v	A105E2
intermittent ignition, 230 v	A105F3
continuous ignition, 115 v	A105F2
continuous ignition, 230 v	A105F3

FOR MORE INFORMATION, CALL YOUR G-E HEATING CONTROLS DISTRIBUTOR

Section 740-135, General Electric Company, Schenectady 5, New York

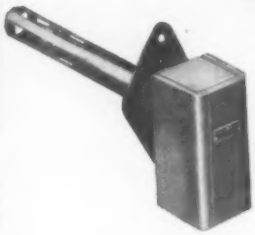
E OF SIMPLE, EASY TO INSTALL CONTROLS

FLAME DETECTORS

Highly sensitive, accurate detector units designed to give dependable operation and protection with General Electric remote mounted master controls. Features: stack or combustion chamber mounting flexibility. Fast acting quartz rod element. Clutch action provides immediate reaction to temperature change.

Nomenclature	
3AHD2A2	Without shield, length 7 19/32 inches
3AHD2B2	Without shield, length 11 19/32 inches
3AHD2C2	Without shield, length 19 19/32 inches
3AHD2D2	With shield, length 7 19/32 inches
3AHD4	With bimetal actuated flame detector for stack mounting, 6½" insertion

WARM AIR LIMIT CONTROLS



Available in limit only or fan and limit models. These sturdy controls regulate forced-circulation warm air systems, and protect the furnace from overheating.

Nomenclature	
CR2992-B111A2	Opens on temperature rise (150 F to 350 F) adjustable limit
B111A3	Opens on temperature rise (300 F to 700 F) adjustable limit
B110A2	Fan and limit with summer switch. Adjustable fan, adjustable limit, and adjustable fan differential.

STEAM PRESSURE CONTROLS

Dependable "direct-acting" limit control that prevents pressure from going too high in a domestic steam system, and maintains a certain pressure in the boiler until the thermostat is "satisfied".

Nomenclature	
CR2927-E108A2	Non-adjustable, normally closed, male fitting
E108A3	Non-adjustable, normally closed, female fitting
E108A4	Non-adjustable, normally closed, compression fitting
E108B2	Adjustable, normally open, male fitting
E108B3	Adjustable, normally open, female fitting
E108B4	Adjustable, normally open, compression fitting
E108D2	Adjustable, normally closed, male fitting
E108D3	Adjustable, normally closed, female fitting
E108D4	Adjustable, normally closed, compression fitting

HOT WATER LIMIT CONTROLS

These controls are sensitive to changes in water temperature, and are generally installed directly into the boiler to provide dependable temperature control and system protection. Adjustable 70 through 250 F.

Nomenclature	
CR2992-B109A2	SPST—normal acting open on temperature rise
B109F2	SPST—fast acting open on temperature rise
B109E2	SPDT—normal acting open on temperature rise or closes on temperature rise
B109J2	SPDT—fast acting open on temperature rise or closes on temperature rise
B109D2	SPST—normal acting closes on temperature rise
B109H2	SPST—fast acting closes on temperature rise

TRANSFORMER RELAYS

Here's a combination transformer and relay that operates circulator, blower or fan motors, and burner motors. In addition they can be wired to control a low voltage circuit.

Nomenclature	
CR7865-C100B2	With enclosure, primary 115 volt, 50/60 cycle
C100B3	With enclosure, primary 230 volt, 50/60 cycle
C100B4	With enclosure, primary 115 volt, 25 cycle
C100B5	With enclosure, primary 230 volt, 25 cycle

FAN AND LIMIT SWITCHES

This new G-E control is now being incorporated in the system of many furnace manufacturers. Be sure you replace the AHL5 in any system you service with the exact same model. There's a complete selection of models available to fit any domestic oil or gas furnace, any 24 volt control circuit.

GENERAL ELECTRIC

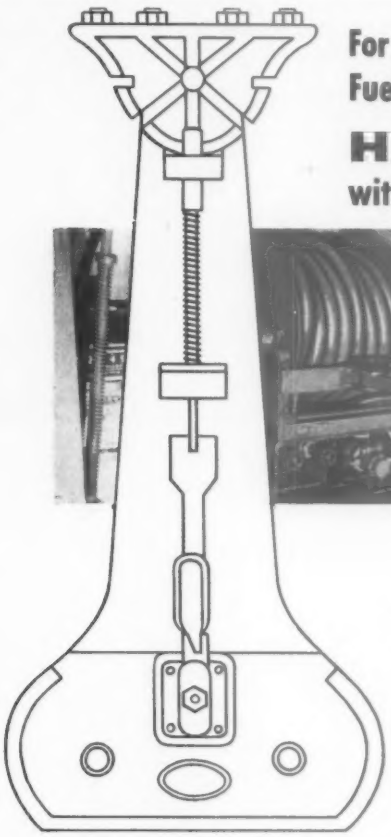
Readers' Problems

(Begins on page 82)

Q. Following ideas in READERS' PROBLEMS *on p. 126, August 1958 issue, I "aimed" for 11½% CO_2 on an entirely new installation, also for 425°F. stack temperature, and smoke reading #2. I can testify this was not easy, but I finally accomplished better than I had "aimed." Taking into account efficiency reduction caused by firing intermittently, what can I estimate the overall efficiency to be of such an installation? Also deducting loss of heat from the boiler, excellently insulated with glass-wool blanket type?*

F. M. S., Portland, Ore.

A. Congratulations! Your letters show you Oregon readers are exceptionally conscious of high efficiencies! Many heating engineers would estimate the efficiency of your installation at 80% to 85%. If the well-insulated boiler does not overheat the room in which it is located, no loss should be chalked up to the fact that the boiler gives off heat to surrounding air.



For Faster Fuel Delivery...

HANNAY Reels with GUIDEMASTER

For any pumping system . . . with any rewind power . . . Hannay hose reels with the Hannay Guidemaster will reduce delivery time, extend hose life, *cut operating costs!* Hannay reels give you fast, positive controlled rewind. Hannay Guidemaster permits left or right delivery and controlled, level rewinding with one hand operation.

See your Oil Equipment Jobber for complete information, or write direct for the Hannay Fuel Delivery Equipment Catalog.

Hose Reels by **HANNAY**

CLIFFORD B. HANNAY & SON, INC., WESTERLO, NEW YORK

Q. (1) When secondary air-oil nozzle in a Shell head burner is moved forward, a point is reached where the flame assumes shape and sound of a blow torch. What causes this?

(2) Then secondary air-oil nozzle is brought back to form a stable hollow cone. But if it is brought back a little more, flame gets wider. Why?

(3) When ignition is on, does the oil spray from a nozzle narrow?

K. R. Saugus, Mass.

A. (1) Such adjusting causes the burner's blower to build up unusually high air pressure in the gun tube, and directs high-velocity blower air into the flame front of the oil flame. Done to an extreme, such adjusting can "blow off" the oil flame.

(2) Because the air pattern itself increases in angle, making the flame wider.

(3) The presence of the ignition spark does not change the angle of spray produced by a nozzle. The flame may "burn back" when the spark is on—the flame front, or starting point of the flame, may be much closer to the nozzle when the spark is on, than when the spark is off. Therefore the flame appearance with the spark on may be considerably different than with the spark off.

You should obtain and follow the instructions which have been published on how to adjust properly the Shell head. Obtain these instructions from a local, division office of the Shell Oil Company.

Q. What is to be done to an oil-burner to compensate for 7,500 ft. altitude and 50-cycle loss?

I. G. M., Mexico

A. At sea level and using 50-cycle electric current instead of the 60-cycle current on which its gallons-per-hour firing rate is based, a domestic burner having a centrifugal blower can produce a maximum fire size 70% of the size produced using 60-cycle current. Reduce this 25% to account for the 7,500 ft. altitude, and you find the correction factor is 52%. Use the thumb rule of 50%. At 7,500 ft. altitude and using 50-cycle current, you can figure that a burner rated for a maximum of 5.0 gph will be able to fire a maximum of 2.5 gph.

SELL THE *LOW PRESSURE* WAY

THE
WINKLER
*
LP
*LOW PRESSURE
OIL
BURNER

Sell the oil burner with a real sales story... proved to save up to 50%

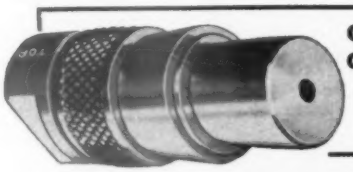
More and more dealers are finding that "low pressure" selling means business—more profitable business—when they sell the amazing Winkler LP Low Pressure Oil Burner!

Winkler is the revolutionary oil burner that gives you a better sales story because it gives you something to sell besides price. This oil burner has a remarkable history of fuel economy—reported in many cases to be as high as 50%!

The Winkler LP ends fuel waste because its non-clog nozzle and positive acting fuel meter permit exact sizing of the burner to match the heat requirements of the building. That means operating periods are longer and more efficient—heat waste up the chimney is reduced to a minimum.

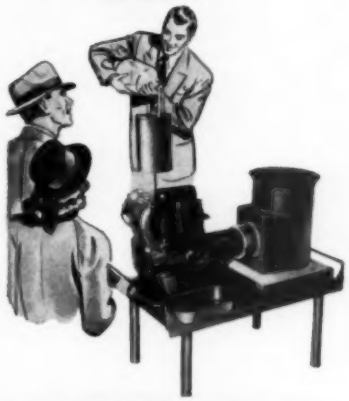
Yes, the Winkler LP costs more—but its higher cost is quickly repaid by its remarkable economy. You earn a decent profit—and keep it intact because costly call-backs won't eat it up.

Write today for full information on how to obtain a Direct Factory Franchise for the Stewart-Warner-Winkler complete line of quality heating and cooling equipment.



CLOG PROOF NOZZLE GUARANTEED 10 YEARS

Won't clog with dirt particles or change capacity with varying oil viscosity.



The Winkler LP Demonstration Unit enables you to prove—*right in your own showroom*—the amazing efficiency of this burner!

Symbol of SW Excellence

STEWART-WARNER

HEATING AND AIR CONDITIONING DIVISION

Dept. H-109, Lebanon, Indiana

Bridgeport, Conn.

OILHEATING MARKET REPORT

AN IMPORTANT oil heat market is represented in the area of this study, surrounding Bridgeport, Connecticut. Within this territory, some 20 miles in width and roughly resembling, in shape, the high crown of a derby hat, a majority of fueloil dealers have now joined to promote the industry cooperatively.

Bridgeport and nearby towns—Fairfield, Stratford, Shelton, Milford—constitute a busy manufacturing center. The surrounding territory is largely residential with wholesale and retail commercial activity, and some farming.

A population estimate of 347,000 for the area is considered to be fairly accurate. Arriving at a figure for dwelling units within the territory is something else. Through various calculations, however, we would place the total of all dwellings at just over 108,000; this correlates well with other cross-reference indications.

With the growth in population, of course, and with the trend to automatic central heating in this period, has come an even greater increase in oilheating installations. A good yardstick to this may be found in the state wide oilburner installations. In 1948, they totalled 161,607; in 1958 they were 357,566, representing an increase of 121%. Though state figures for central gas units in operation are not available for ten years ago, as of the first of this year there were 34,930 such systems in use, or less than 10% of the total number of oilburners.

Home heating Characteristics

Of only slight value in appraising this market are figures for domestic fueloil rations for 1945. These are county totals and, as pointed out, do not match the specific market under consideration. For all of Fairfield County, in that year, there were 27,610 fueloil permits for central heating systems, 49,514 for space heating usage.

The predominant types of heating systems, as of October 1958, shape up as follows:

	Central	*Non-Central*	*Total*
Coal	6,072	3,188	9,260
Gas	13,435	11,874	25,309
Oil	52,376	14,281	66,657
Other	4,023	3,188	7,211
	75,906	32,531	108,437

Overall, the ratio of central to non-central, or space, heating systems figures out to 7:3, or 70% central. In oilheat's case, central heating systems are more preponderant, or nearly 80% of all installations.

In addition to the 52,376 oilfired systems estimated in residential use there are, we calculate, another 6,500 installed in small apartments or small commercial establishments. This gives a total of 58,876 domestic oilburners in operation.

Competitive Fuels and Costs

Anthracite is the variety sold for home heating. With a per-pound Btu content of 13,000, its cost per therm, based upon a current retail price of $28 per ton, is 10.8¢.

Natural gas is furnished by the Bridgeport Gas Company. This fuel, of 1,000 Btu content per cubic foot, was introduced during 1952 in Bridgeport, Fairfield, Long Hill, Trumbull and Stratford and their environs.

A mixed gas, of 660 Btu content per cubic foot, is distributed by the New Haven Gas Company in a small section of this market to the east, around Milford.

In the case of natural gas, a typical requirement for househeating of 1,680 therms (the equivalent, in heat content, of 1,200 gallons of No. 2 fueloil) would cost $246.19, or an average of 14.7¢ per therm. This is 44.5% more than for the same heat content in fueloil at 14.2¢ per gallon.

The mixed gas is even more costly for househeating—the quantity required to furnish an equivalent 1,680 therms would cost $272.64, or 60% more than oilheat.

No. 2 fueloil, at the time this report was prepared, was sold in the Bridgeport area at 14.2¢ per gallon, tank wagon. The per therm cost at this price works out to 10.1¢.

Fueloil Distribution

Total fueloil volume is difficult to calculate in this market for reasons stated. From a number of bases, however, we have arrived at an estimate of 105 million gallons as the total volume of No. 2 fueloil distributed in the area. A bit more than a quarter of this, or 26,325,000 gallons, is used in centrally-installed systems in small apartments and small commercial establishments. The volume of No. 1 or kerosene, is minor, totalling about 6,500,000 gallons.

It appears, from a composite of estimates made by local oilmen, that about 40% of the total gallonage of distillates is brought into this market by major oil companies. The larger share, 60%, is supplied through independent wholesalers (though their supply also originates with major companies).

These same wholesale suppliers also do the largest volume of direct-to-customer business, about 51% of the total retail volume. Another 12% is distributed direct by the major companies. The independent fueloil dealers market the remaining 37%.

Only about 20% of the independent dealers maintain any appreciable bulk storage facilities of their own; the rest normally purchase "under the fill," loading product at the racks of other companies. Just under 60% of the total retail market gallonage handled by dealers is purchased here in this way, under the fill.

The distribution pattern in the market is quite highly refined. About 71% of all No. 2 fueloil customers are served on an automatic, or "keep filled" basis; 47% of oilheat user's tanks are VENTALARM-equipped; 17% of the customers use budget plans. An industry estimate on another point, as to the number of customers following formal budget plan payment practices tallies, at 17% of total oilheat users in the market, with typical figures for comparable eastern markets.

Involvement, on the part of the independent fueloil distributors, with the sale of gasoline is minor—only about 10% of all such companies market this product in addition to their heating oils. Coal is sold by only 7% of the fueloil dealers. Better than half (52%) of the fueloil companies sell and install oilburning equipment.

Market Concentration

A good count has been obtained on individual dealer companies operating in the area, and a careful estimate made of the number of fueloil delivery trucks run by each firm. This calculation points to a total of 340 trucks in use by 114 local marketers. There are an estimated 30 additional "foreign" trucks delivering product in the area, operated by firms outside the perimeter of the market as defined.

Considering only the vehicles owned by companies within the defined market, however, a breakdown of trucks per firm works out as follows:

79 companies operate 1 or 2 trucks each
25 companies operate from 3 to 5 trucks each
7 companies operate 6 or 8 trucks each
3 companies operate 12, 26 and 40 trucks respectively

Thus the average, over all 114 companies, is at nearly three trucks per company. But excluding the three largest companies, with their total of 78 trucks, an average of closer to two trucks per company is revealed.

Oilheating Equipment Sales

Equipment sales, as indicated by the fact that more than half of the fueloil dealers handle oilburners, are in good hands, and these marketers put in about 57% of all oilheating equipment installed in the territory. The straight plumbing and heating dealers do about 28% of the overall equipment sales volume, and the specialized burner service companies the remaining 15%.

Oilburner Service

The industry locally takes a strong responsibility in "servicing what it sells." About 67% of the market's installed burner service requirements are handled by fueloil companies. The remaining third of the total service load is divided between specialized burner service firms, handling 22%, and plumbing and heating dealers, handling 11%.

The fueloil companies also are assuming an increasing responsibility, year to year, in taking over still more of the market's equipment maintenance needs.

About 22% of all operating oilburners are kept in tune under regular contract maintenance by the industry. Another 29% receive at least annual attention—outside of regular service contract protection.

The median price charged for the typical "full" service contract, including parts replacement, runs to $27.50 in this vicinity. For the contract package, excluding parts replacement, the average charge is $18.25. Annual cleanups are billed at from $12 to $15, and the usual minimum hourly rate for service calls (not including under service contracts) comes to $4. The non-fueloil companies charge at least $1 more.

Advertising Promotions

There seems to have been some moderate promotion of oilheat in this area by major supplier companies, individually. About a fourth of their overall emphasis has been directed to promotion of oilheat as a facility, with the balance of the messages aimed at the sale of the particular supplier's brand.

Among the independent marketers, approximately one company in ten (11%) conducts any consistent advertising effort on its own for oilheat. Such promotion is relatively modest in extent, running to a total expenditure in all media of about 55¢ per fueloil account.

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OHI Directors Meeting

(*Begins on page 74*)

and two others are to be published. The Committee on Fuel Filters is exploring methods, as is the Committee on Tank Corrosion. He said that several former committees have now been merged into one under David Hogin of Esso Research & Engineering Co. A new committee has been formed on Codes, particularly those that restrict oilheating industry progress. Eugene Olson of Delavan will be chairman of the 1960 Technical Division symposium in April, at which three strong papers will be presented.

Everett Elliott brought a preliminary release of the Harvard study being made in collaboration with the OHI of New England. This was an exploration of the financial and operating characteristics of 83 retail fueloil distributors in the greater Boston area, having $84 million in gross sales and 298 million gallons of light oil business in 1957, the year explored. The final report, soon to be ready, represents a $20,000 cost. The project was originally started by Fred Beckwith.

John Olson, Standards Committee chairman, said he has had very fine response from manufacturers, both OHI members and non-members, and he believes it advisable to keep the committee active, now that its original project in standards B58 and B59 have been completed. He feels that these documents need some updating and improvements from time to time. He has six other tasks in prospect, including one on terminology, another on approvals now being required in Massachusetts, Connecticut, and New York City, and closer working relationships with Underwriters' Laboratories.

For the Education Committee, Robert Hundley, chairman, brought quite a significant report on the new service technicians examination procedure. This is a program for rating service men on their oilheating skills. Quite comprehensive examinations have been prepared, first on high pressure burners, then a second on low pressure and rotary burners. A silver seal card and lapel button will be given to those men passing with a mark of 80 or better the first examination, a gold seal to those passing at 80 both examinations.

A dealer who has more than half of his service men passing either one or both examinations may display an emblem in his window, on trucks and in his advertising showing that his service is by OHI approved mechanics.

Hundley noted that this program should be promoted to the public, and also observed that the answers to the exam questions will point to educational needs for the industry.

The service man will pay $2 to take the examination, and these will be held at any point where 40 men can be interested. Proctors are to be appointed, either an educator from a high school or vocational school, and they will have a fee of $20 for conducting the examination. Charles Burkhardt commented that by the end of 1960 he expects to have 6,000 men certified out of an industry total of 36,000.

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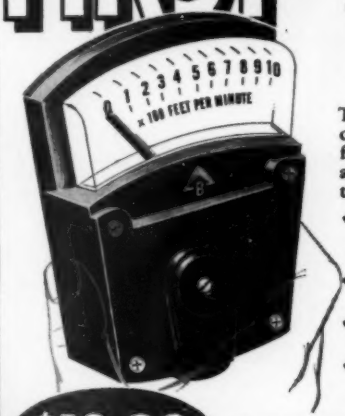

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F-29

Hundley then told the group that the strip film projects of this committee keep expanding and that a new film will be ready in early October from Bacharach Industrial Instrument Co. He hopes that burner manufacturers will collaborate on a film on servicing various types of burners.

Next to report was Charles Bendix, chairman of the Membership Committee for manufacturers. New members submitted and voted in by the board were American Tube Products Co., West Warwick, R. I., and General Electric Co., Appliance Control Department, Morrison, Ill. Also approved on a letter of intent and subject to formal announcement was American-Standard Corp., New York.

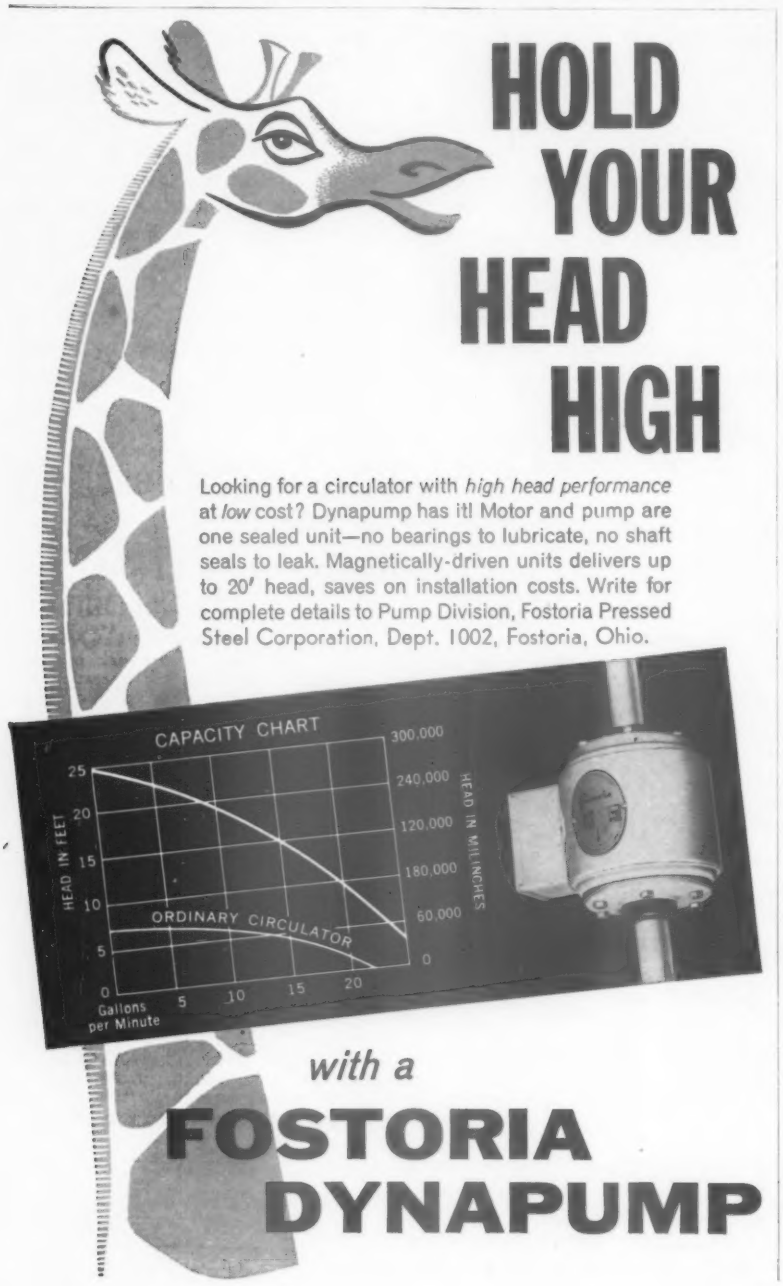
Bendix feels that the Institute now has some tools to sell with, long needed. These are the B58 and B59 standards, the new brochure on what OHI does for manufacturers.

Pat Caputo, membership chairman for dealers, reported a new chapter, the Better Home Heat Council of Florida. This was approved by the board. He also listed four new associate memberships.

Fred Heaney, president, credited Arthur Winkler and Bendix for their earlier efforts toward making possible the new solicitation brochure. He then told the board that David Bottrill, technical secretary of OHI, was now to be outside sales manager calling on manufacturers on behalf of the coming exposition.

Stanley Czarnecki, chairman of the Time and Place Committee, discussed the forthcoming annual meeting and show at New York, April 4-7, 1960. He also asked for comments on the proposed 1962 exposition. There was considerable variation of opinion expressed, to the point that president Heaney agreed to appoint a committee of exhibitors to make a recommendation next April. The board then voted that an additional $4,500 be spent on public relations.

For the regular fall directors meeting in 1960 the board voted for a boat trip to Bermuda on dates to be announced but at about the customary time in late September.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A COMPLETE LISTING with applicable specifications and typical uses is now available for Scovill Manufacturing Company's General Commercial Tube Products, Waterbury, Conn.

District sales offices and stock depots carrying tubing for oil lines and water lines for heating systems also are listed. Copies are available by writing the company at 99 Mill St., Waterbury.

Liquid Controls issues Spec Sheets on Meters

COMPREHENSIVE specification sheets on positive displacement meters for bulk loading racks, pipe lines and oil trucks have been published by Liquid Controls Corp., North Chicago, Ill.

The sheets show dimensional drawings, capacity and pressure data, plus meter weights. They also give a detailed description of attachments available to meet special requirements. Copies may be obtained by writing the company.

By far the most complete line of Ignition Electrode Assemblies, insulators, fittings, bus bars and cable. For fastest service on exactly the ignition parts that you want, always order from a "Dielectric" Jobber. There's one near you! 7-59-1

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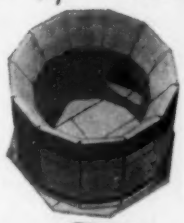

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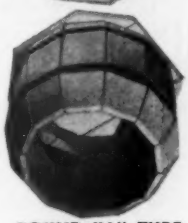

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Statement of Ownership

Statement of the ownership, management and circulation required by the Act of Congress of August 24, 1912, as amended by the Acts of March 3, 1933 and July 2, 1946 (Title 39, United States Code, Section 233) of FUELOIL & OIL HEAT, published monthly at Baltimore, Md., for October 1959:

State of New York, County of New York—ss

Before me, a notary public in and for the state and county aforesaid, personally appeared Robert Gray, who, having been duly sworn deposes and says that he is the editor of FUELOIL & OIL HEAT and that the following is, to the best of his knowledge and belief, a true statement of ownership and management of the aforesaid publication for the date shown, required by the Act of August 24, 1912, as amended by the Acts of March 3, 1933 and July 2, 1946 (Title 39, United States Code, Section 233), to wit:

1. That the names and addresses of the publisher, editor, managing editor and advertising manager are:
Publisher—Heating Publishers, Inc., New York, N. Y.
Editor—Robert Gray, New York, N. Y.
Managing Editor—Bert Dunphy, New York, N. Y.
Advertising Manager—A. G. Winkler, New York, N. Y

2. That the owner is: (If owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of stockholders owning or holding 1 per cent or more of total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a partnership or other unincorporated firm, its name and address, as well as that of each individual member must be given.)
Heating Publishers, Inc., 2 West 45th St., New York 36, N. Y.
Stockholders: Leod D. Becker, Milford, N. J.; A. E. Coburn, Yonkers, N. Y.; Robert Gray, Chalfont, Pa.; A. G. Winkler, Ft. Lauderdale, Fla.

3. That the known bondholders, mortgagees and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: (If there are none, so state.) None.

4. That paragraphs 2 and 3 include, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting; also the statements in the two paragraphs show the affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bonafide owner; and that this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities, than as so stated by him.

ROBERT GRAY, Editor

Sworn to and subscribed before me this 8th day of September, 1959

MARGARET V. McINERNEY

(My commission expires March 30, 1961)

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Hydrovalve's CONTROLLED-TENSION TERMINALS —

- Are made of nickle-plated spring-tempered brass.
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Industry Groups

(Begins on page 36)

OHI of America names membership Committee

A SEVEN-MAN membership committee for Oil-Heat Institute of America, New York 36, N. Y., has been appointed, with Charles B. Bendix, Sundstrand Eng., Chicago, as chairman.

Other members are: Milton Way, Way-Wolf Co., Long Island City, N. Y.; Walter Blake, Stewart-Warner Corp., Lebanon, Ind.; Tom Reed, Minneapolis - Honeywell Regulator Co., Minneapolis, Minn.; Arthur Winkler, FUELOIL & OIL HEAT; Thomas Byrley, *Fuel Oil News;* Frank Breese, *National Petroleum News.*

Bendix noted that the Institute recently stepped up activities on all fronts, and this, he feels, has resulted in considerable added interest and support from oilheating and accessories manufacturers, as well as dealers. Consequently Bendix predicts a substantial increase in Institute membership during 1959 and 1960.

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TAPERED NOZZLE PLUG
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CUTS Fuel Oil Delivery TIME IN HALF.

SPEEDS UP VENTING, safe fill tapered nozzle plug is especially developed for use with VENT-ALARM Signals. It allows pumping speed to be stepped up.

TIGHT CONNECTION eliminates excess air to be sucked in through fill pipe while tank is being filled.

SAFE FILL tapered nozzle plug is the only approved and patented tight connection on the market—it has a safety valve that pops off at approximately 5 P.S.I. prevents rupturing oil tank.

Type B1

SAVES TIME & LABOR, permits faster filling. drivers are able to cut down the pumping time by as much as 50%.

Small Size-Pipe ¾" 1" 1¼" Tube O.D. 1⅜" 1½" Plugs $1.95, Plug & Valve $3.95, Plug, Valve & Tube $7.90. Large Size-Pipe 1½" 2" 2½" 3" Tube O.D. 1⅞" 2⅛" 2⅜" 2⅞" 3⅛" 3¼" 3½" Plug $4.95, Plug & Valve $6.95.

Manufactured by:
GASOILAIR EQUIPMENT CO.
P. O. Box 768, New Haven, Conn.

Bouve is named Secretary of ARI Product Sections

WARREN L. BOUVE has been appointed secretary, ARI Product Sections, by the Air-Conditioning and Refrigeration Institute, Washington, D. C.

This is a new post created following the resignation of Miss Mary Jane Stewart, assistant director. Bouve will be responsible for arranging meetings for the 14 product sections working directly with Managing Director George S. Jones, Jr.

Northern New York Institute appoints Martinet Secretary

H. E. MARTINET, Watertown, N. Y., has been elected executive secretary of the Modern Oil Heat Institute of Northern New York. He will coordinate selling and collecting activities for the association and act as liaison between the Institute and the advertising and public relations agency.

The new secretary retired from active business in 1958 after 39 years of association with the industry. He has been active in all facets of fueloil retailing.

Philadelphia Fuel Conference has annual golf Tournament

THE ANNUAL fall outing and golf tournament of the Greater Philadelphia Fuel Conference and the Coal Club of Philadelphia were held at the Manufacturer's Golf and Country Club, Oreland, Pa., September 22.

Bill McFeeters was golf chairman, John Smith was in charge of non-golfer activities, and Ed. Schreiber headed the dinner committee.

North Carolina Jobbers have fueloil Panel at Convention

A PANEL discussing developments in the fueloil industry was featured at the annual fall convention of the North Carolina Oil Jobbers Association at Asheville, September 20-23.

Fred Burroughs, National Fueloil Council, was the moderator and serving on the panel were D. L. Barrett, Esso; C. M. Blickensderfer, Sinclair;

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So fast . . . so easy to install because there's fewer pieces. One package gives you everything you need including pre-cast self-leveling base or hearth. Designed with maximum combustion area . . . engineered for more complete fuel combustion—Immediate delivery . . . sizes 6/10 to 12 gallons per hour. Write for latest bulletin.

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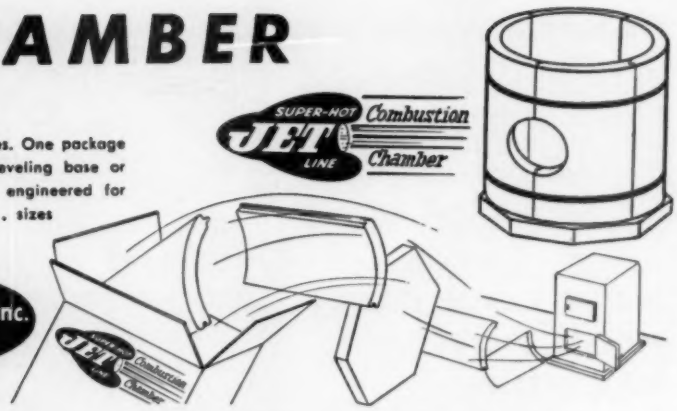

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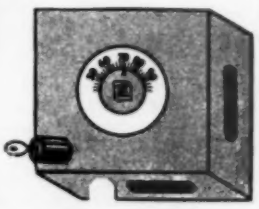

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A practical guide on oilburner installation. It contains the most significant articles from FUELOIL & OIL HEAT that cover all phases of installation step by step. 8½ x 11 inches in size . . . 64 pages . . . illustrated with numerous diagrams, charts and photos . . . Only $2.00 a copy.

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". . . on seams of large oil tanks where weld was not perfect."
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William Sullivan, Shell Oil Company.

The Association has had two recent burner service schools. They were both held at State College, Raleigh, N. C. The first was a basic school running from September 28 until October 2; and the second was an advanced course running October 5 through October 8.

South Carolina Oil Jobbers have management Workshop

A WORKSHOP for executives only was held on October 6 and 7 by the South Carolina Oil Jobbers Council at the South Carolina University.

Management sessions were conducted by Leroy Schneider.

NEW LOW COST HIGH POWER VACUUM

New hidden, patented filter*

—3 times more power

The new Premier Model P-950 Vacuum, with the new hidden, non-clog filter, is the only true low cost furnace cleaner. The hidden filter gives you more usable capacity than other vacuums twice the size. You can clean 4-5 home furnaces without emptying. Yet it is so small it fits easily on the floor of your car. Over 2000 in use. Other models range from 16-48 qt. usable capacity, including 3 in 1 units: wet or dry, blower or shoulder vac.

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Navy Bureau releases shore facility Manual

THE U. S. NAVY Bureau of Yards and Docks manual on design and installation of plumbing, heating, ventilating, airconditioning and dehumidifying systems in Navy shore facilities has been published for sale to industry.

The section on heating systems discusses the demands made on such systems and types, selection, piping, control and other aspects. A separate section deals with airconditioning systems.

The manual, PB 151693 *Basic Mechanical Engineering*, Chief of Civil Engineers, Bureau of Yards and Docks, U. S. Navy, may be ordered from OTS, U. S. Department of Commerce, Washington 25, D. C., price $2.50.

❖

Reynolds Girdler, director of public relations and advertising, has been elected a vice-president, Sinclair Oil Corp., New York. He joined the company in 1952 after many years in the fields of financial writing and advertising.

Frank P. Gibbons is Ohio representative for General Filters, Inc., Novi, Mich. Gibbons, whose appointment was effective July 19, will cover the entire state, except the Toledo area.

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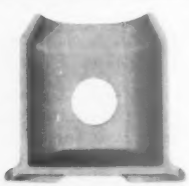

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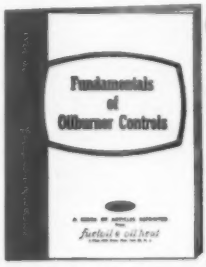

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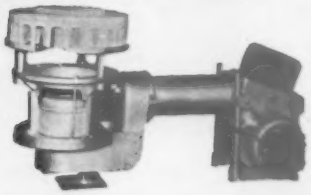

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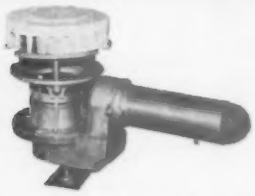

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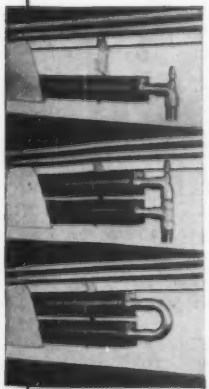

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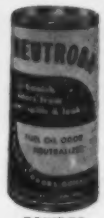

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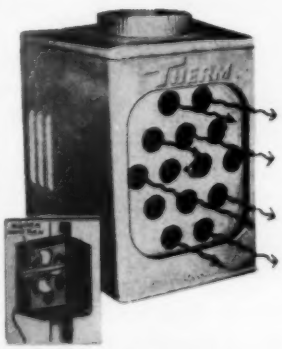

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—A—

American Society of Heating Refrigeration and Air Conditioning Engineers 121
American-Standard Air Conditioning Division 119
American-Standard Plumbing & Heating Division 101
Applied Mechanics Co. 30, 91
Ardmore Products Division 16
Automatic Humidifier Co. 136

—B—

Babcock & Wilcox Co. 104
Bacharach Industrial Instrument Co. 127
Bell & Gossett Co. 29
Bethlehem Foundry & Machine Co. 88
Boston Machine Works Co. 129
Brodie Company, Ralph N. Inside Front Cover
Buckeye Iron & Brass Works, Inc. 109

—C—

Carlin Company, The 15
Chevrolet Motor Division 11, 12, 13
Chrysler Corp., Airtemp Division 35
Commercial Filters Corp. 118
Crescent Parts & Equipment Co., Inc. 135
Cromwell Printery, Inc. 136

—D—

Davis Engineering Corp. 75, 76
Degree Day Systems 130
Delavan Manufacturing Co. ... 34
Dewey Gas Furnace Co. 83
Dielectric Products 129
Dunkirk Radiator Corp. 28

—E—

Eagan Co., Inc., Walter H. 81
Edwards Engineering Corp. 133
Electric Autopulse Division 108
Electrol Burner Mfg. Co., Inc. .. 83
Ever-Tite Coupling Co. 46

—F—

Ford Motor Co. 68, 69
Fostoria Pressed Steel Corp., The 128

—G—

Gasoilair Equipment Co. 130
General Automatic Products Corp. 127
General Controls Co. 18
General Electric Co. ..47, 122, 123
General Fittings Co. 78
Gorton Heating Corp. 112
Granberg Corp. 93
Grainger, Inc., W. W. 133
Grant Wilson, Inc. 131
Guardian Products Corp. 26
Gulf Oil Corp. 114, 115

—H—

Hannay & Son, Inc., Clifford B. 124
Harsch & Co., H. 134
Hart Heat Division 116
Harvey, Inc., Sid 107
Hayward Oil Burner Corp. ... 133
Heat-Timer, Corp. 45
Henry Furnace Co., The 37
Herco Oil Burner Co. 120
Hess, Inc. 39, 40, 41, 42
Hoff Manufacturing Co., The .. 118
Hoffman Specialty Mfg. Corp. .. 9
Hydrovalve Co. 129

—I—

Industrial Combustion, Inc. 94

—J—

Johns-Manville Corp. 86, 87
Johnson Company, S. T. 82
Johnson Furnace Co., The 110

—K—

Keeney Manufacturing Co. 89
Kenite Laboratory 135
Klemm Automotive Products Co. 92
Kraissl Company 84

—L—

Lake Chemical Co. 131
Liquid Controls Corp. 23

—M—

Mack Trucks, Inc. 103
Maid-O-Mist, Inc. 36
Marlow Pumps 113
Mastercraft Industries, Inc. 43
McDonald Mfg. Co., A. Y. 31
McDonnell & Miller, Inc. .Back Cover
McLarty Systems 136
Minneapolis-Honeywell Regulator Co. 79
Mobil Oil Company 85
Monarch Mfg. Works, Inc. Inside Back Cover
Monogram Products Co. 136
Mt. Hawley Mfg. Co. 24
Mutual Manufacturing Co. 127

—N—

Neptune Meter Co. 33
Norwood Products Co. 32

—O—

OPW Corporation 10, 43
Olsen Mfg. Co., C. A. 50

—P—

Penn Controls, Inc. 25
Philadelphia Valve Co. 117
Plastic & Appliance Co. 46
Power Flame Division, Inc. 81
Premier Company 132
Pullman Vacuum Cleaner Corp. 100
Purolator Products, Inc. 17
Pyramid Instrument Corp. 38

—R—

Reif-Rexoil, Inc. 130

—S—

Scovill Manufacturing Co. 27
Scully Signal Co. 7, 48
Serre Products Co. 134
Shell Oil Co. 49
Shenango Refractories 132
Signet Controls 95
Sinclair Refining Co. 90
Smith Corp., A. O. 97
Stewart-Warner Corp. 125
Sun-Ray Burner Mfg. Corp. 4
Sundstrand Hydraulics 3

—T—

Tankit Company 135
Therm Gas Generator Co. 135
Thermolok Mfg. Co., Inc. .106, 131
Thrush & Company, H. A. 105
Time Saving Fills, Inc. 28

—V—

Vignere Oilgas Burner & Mfg. Co. 134
Vulcan Radiator Co. 83

—W—

Walker Mfg. & Sales Corp. 102
Webster Electric Co. 14
William Wallace Co. 111
Wix Corp. 96
Worcester Brush & Scraper Co. . 133

—Y—

York-Shipley, Inc. 44

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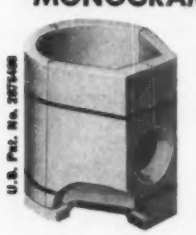

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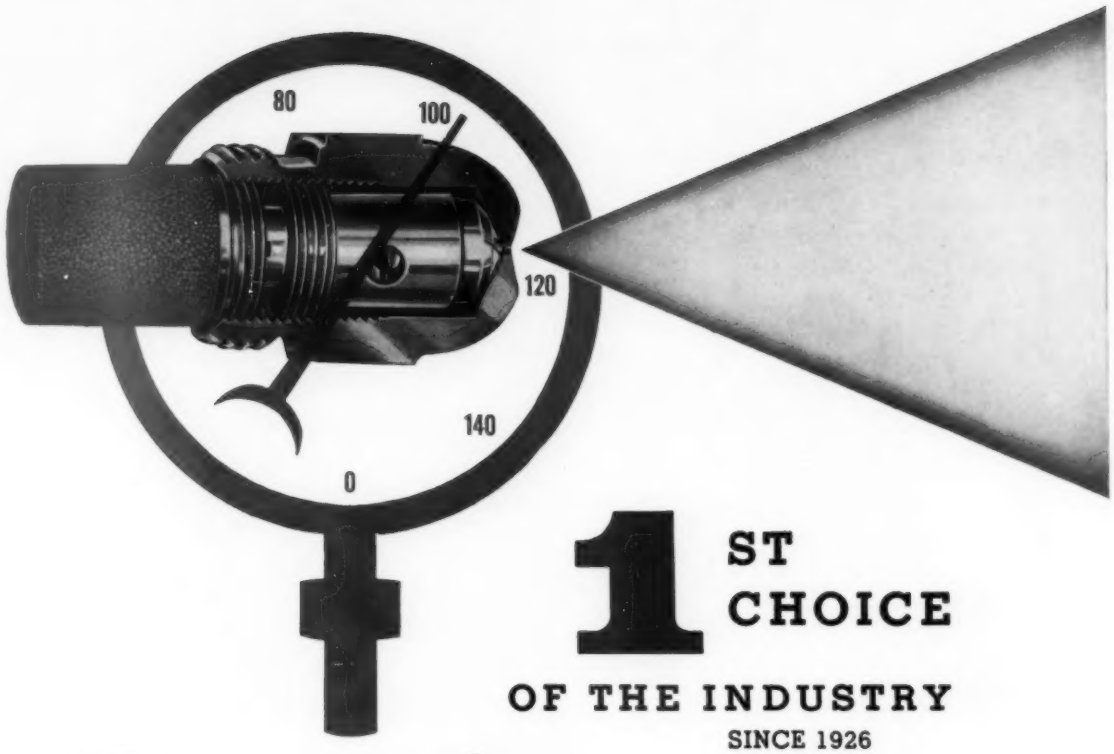

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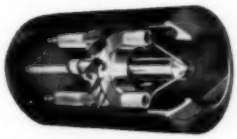

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—Standard equipment—an extra switch at no extra cost. Listed by Underwriters' Laboratories. Connect it to a McDonnell No. 101 Electric Water Feeder to add water to boiler as needed. No. 101 valve is spring loaded to give a powerful drip-tight closure against any city water pressure.
Tailor Made Blow-Off Valve
—Another McDonnell exclusive with new "miracle nylon" bushings. One quarter turn of handle quickly opens,—spring closing. Discharge opening larger than boiler inlet provides positive drop in water level; completely drains float chamber; gives accurate check on cut-off operation.

Above you see some of the many reasons why McDonnell Low Water Cut-offs cost less installed...provide maximum dependability...give longer service life.

McDonnell & Miller, Inc., 3500 N. Spaulding Ave., Chicago 18, Ill.

Doing One Thing Well

REG. U. S. PAT. OFF.

McDONNELL *Boiler Water Level Controls*